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P R O C E E D I N G S

MR. WATKINS: Good morning everybody. It's a pleasure to welcome you here to this event. My name is Kevin Watkins. I'm a senior research fellow at the Center for Universal Education in the Brookings Institution.

And we're very privileged to have with us today Albert Motivans, who is one of the lead authors of the new UNESCO Institute for Statistics Report on Secondary Education. And it's actually a terribly important report, for all sorts of reasons. I think it would be fair to say, if you look back over the past decade since the World Conference on Education for All in Dakar, we have tended to focus quite strongly on primary education. And at one level, of course, that's completely justified -- that we still have 68 million children out of school, many millions more children who are in primary school but not learning an awful lot because of the quality of education.

But we also know that secondary education -- both for individuals and for countries -- is critical to their prospects and opportunities. It's critical for individuals because we know from the evidence across many countries, including the United States, that people who don't graduate from secondary education have diminished prospects for employment, and increased likelihood of living in poverty, of living lives at the margins of society.

But we also know that a secondary education is what generates these very big human development returns, in terms of female education in particular, in terms of reduced child mortality, improved nutrition, and enhanced equity in society.

So, for countries and for people, there is a very real sense in which secondary education, and the transition from primary into secondary education is really the bridge to the future.

So this is a very timely opportunity to discuss with Albert the content of

the report.

We've structured the discussion around three core themes. The first of those themes is equity. And I think nobody in this room would contest the importance of secondary education. But in many of the world's poorest countries we see these huge discrepancies in opportunities between rich and poor, between girls and boys, between groups living in rural areas and groups living in urban areas. So breaking down those inequalities in opportunity is an absolutely central part of the challenge in secondary education.

A second area for debate is public finance. In countries where only a tiny minority of children get through into the secondary education system, simply increasing spending can actually have the perverse effect of exacerbating disparities between richer groups who have access to secondary schools, and poorer groups who don't. So how do we break down the financial barriers facing poor households seeking to get their children into the education system?

And the third area for debate -- which is also covered in the report in some detail -- is teachers. I think there's a very real sense in which no education system anywhere in the world is better than its teachers. And indeed, if you look at the evidence from the OECD's reports, they're absolutely clear that the single common defining feature of every strong-performing education system around the world is that they produce good teachers, they ensure that good teachers are linked up to underperforming schools and marginalized children, and they deliver results.

Now, we're very privileged to have a distinguished panel with us to take us through the discussion today. Our chair is Kavitha Cardoza, who many of you will know. She's a reporter for WAMU 88.5 on education. What you won't have picked up -- I actually discovered from talking to Kavitha before that she was born in Liverpool, and then

lived briefly in Wales. And I can assure you she neither has a Liverpudlian accent nor a Welsh accent -- as you'll detect for yourself when she takes the chair.

She's worked at WAMU for six years as an anchor, and on other public radio stations. She studied at the University of Illinois in Springfield, and in Bangalore in India. She's won numerous awards for her work in journalism, including, in 2010, a special citation by the Education Writers Association for their National Awards for Education Reporting.

So, Kavitha, you're very welcome, and thank you for being here with us.

We also have with us Sir John Daniels, who spent 17 years as a university president in Canada and in the United Kingdom at the Open University before joining UNESCO as Assistant Director General for Education in 2001, and becoming President of the Commonwealth of Learning in 2004. He's been very closely involved in the development of open and distance learning, which is an area in which he's, in fact, provided global leadership over many years. He has some 300-plus publications, and was knighted in 1994.

We also have with us Owen Ozier, who's an economist in the World Bank's Development Research Group, Human Development and Public Services Team. His work focuses on education, health, and labor markets in East Africa, where he's been involved in research projects for the past eight years. And his most recent projects and reports include, I think a very insightful report on Kenya, which I would really encourage everybody here to go and download after this meeting and read.

And last, but absolutely not least in this context, we have Albert Motivans, who heads the Education Indicators and Data Analysis Section of the UNESCO Institute for Statistics, where he oversees the global development collection and analysis across national education indicators, the bench-marking education policy, and monitoring

progress towards the goals.

So, Albert, I'm going to pass over to you now to present the findings of the report. Thanks very much.

Presentation

MR. MOTIVANS: Well, thank you very much, Kevin. And thanks, also, to the Brookings Institution and Center for Universal Education for providing this opportunity to present the findings of this report. There are copies of the report outside of the room. It's the *Global Education Digest*. This is an annual publication, which we produce, which presents some of the annual education data from across the world, and also addresses a specific theme each year. And this year the theme is on secondary education.

One of the reasons why we chose this topic is -- well, I think Kevin has already explained, presented some of, really, the important rationale for focusing on this topic. But there are a lot of discussions that are now, as we head towards 2015, about international goals, about progress, about the challenges that remain.

And as we've seen already, and as we've heard many times already, there's been substantial progress in terms of access to primary education.

And here are some of the figures that we've seen in the last decade. Net enrollment ratios in primary education going up from 84 percent globally to 90 percent. We don't have a good measure of primary completion, but the proxy measure that we have shows also that increases in the number of children who -- the proportion of children that actually complete primary education. So it's not only about enrollments, or sitting in school, but it's also surviving through the end and completing primary education that we see this progress.

However there are concerns -- and I think it is important to note these concerns up front -- that by no means does this signal that the challenge in primary

education has been achieved. And I think any discussion about secondary education and the content of secondary education, the acquisition of skills and knowledge in secondary education, certainly owe a great deal of debt to what happens in primary education. And what we've seen so fare is that there's a lot of concern about education quality, particularly in less developed countries, and learning outcomes -- where we see, for example, the low levels of reading ability in early grades, or whether we see more than half of the pupils who finished six grades of primary education not having really basic literacy and numeracy skills.

So I'll discuss a little bit more about the situation in secondary education, but it's within this context that certainly by no means does this mean that the challenge in primary is complete.

But I think we also see that there's a strong connection between primary and secondary education, and that in many ways it's not helpful, in some ways, to single out the secondary sector and to treat it on its own, and not to think about its relationships both to primary education, to the labor market, to higher education.

As Kevin noted already, secondary education is a bridge to a better future. I won't go through this again, but I think articulated it quite nicely, in terms of what the individual returns are, as well as the social returns.

We've done analysis now that's a little bit older, which looked at economic growth in middle-income countries. And what we found in that research was that, in fact, it wasn't until there was a critical mass of secondary graduates that, really, growth tended to take off.

It's a key transition point for individual, for young people. It's a transition between primary education and continuing on to higher education. It's also the transition point between school and the labor market.

We see very few regional, and no global development goals, really, targets, for secondary education. There are some regions, which have regional targets. I'm thinking of Latin America and the Caribbean, for one, where there was a target for 2010 to reach 75 percent enrollment rate for secondary education -- and which I don't think was reached. And they've, I think, re-set some goals for 2020, which look at both lower and upper secondary.

And I think it's really important at the outset to really define what we mean by secondary education, or at least what I'll address in this short presentation about secondary education. We're really talking -- I'm really talking more about lower secondary education than upper secondary education.

And I think making that distinction is very important. We're talking about very different target groups -- just roughly speaking, globally, lower secondary education, we're looking at 11 to 14 years, or 12 to 14 years, three years, roughly, on average, of education.

We want to look at it relative to upper secondary education, or senior secondary, but we want to be able to look at them separately. Because the issues are different, as we'll see. And I think this is essential.

The problem is sometimes with the data. And for many years UNESCO was only publishing data on secondary education, without separating these two elements. But I think that's something, which has changed now. And, in fact, we produce, now, out-of-school figures for lower secondary school-age youth around the world. And as you can see here, it's slightly more than those out-of-school of primary school age. So 72 million lower secondary-age youth.

So it's slightly more. But remember, we're also talking about maybe a three-year cohort, or a three-year age group, rather than roughly a six-year age group in

primary.

I think it's also important to think about the diversity in secondary education, as well. Lower secondary might be considered part of a basic education package, or part of compulsory education, part of a link, actually, closer to primary education than to upper secondary, or further education

But there's also, then, different pathways and different orientations which we find in both lower and upper secondary, including a kind of general or academic secondary, versus a vocational or technical orientation -- which also, then have implications for the student in terms of pathways.

And then, finally, I'll be focusing mainly on formal education. And we know that non-formal education, especially for youth, plays a really important role, especially in developing countries. And that's something which can't be -- that needs to be part of the discussion, even if it's not so well covered by official statistics.

So just looking at -- this is just absolute numbers. We see really strong growth in participation in secondary education since 1970 -- but particulary in the last decade, last two decades, since about 1995, we see a strong up-tick in global secondary enrollments. And most of this growth, in absolute terms, is coming from countries with very large populations. So the top three countries which increased the most since 2000 are China, India, and Indonesia -- in absolute terms.

And you can see on the bottom of the chart how Asia and South Asia really pick up, especially in the last decade. And really kind of drive the growth in secondary education.

It's also important to look at it in relative terms. And when we look at countries that have expanded in relative terms to where they started, from probably a lower baseline, we see countries like Afghanistan, Ethiopia, Cambodia, Mozambique -- I

don't know if I said Ethiopia, but I'll say it again -- Ethiopia -- are ones that really widened the secondary sector in the last 10 years.

So how long does it take to achieve broad access to secondary education, if we're talking about this idea of broadening access, of widening access to learning opportunities at the secondary level?

This is another way of looking at participation, but this is really looking at completion -- what adults have actually completed in terms of education, what level of education they've completed, rather than participation, as we saw in the last slide.

And here we're looking at two examples from East and South Asia -- Republic of Korea on the left, and Pakistan on the right. And I think oftentimes we see the example of Korea brought up as a way of--not only tying to social mobilization around improving access to schooling, including secondary schooling, but also in terms of the development outcomes that we've seen in the country, and the links to that mobilization of educational -- of widening educational access.

But we see from this -- and this is looking backwards -- so if we start from the left-hand side, that's the older population. So this is the population that was born in the 1920s, went to school in the >40s. And as we move to the right, we're going through time. So, we see, really, the increase starting in the 1950s.

But we see that even though there's a great social mobilization, it still takes a great deal of time. So it's really remarkable progress. There's progress that unfolded over a number of decades. And it took 20, 30 years to reach universal primary education. Another 10 years to reach lower secondary -- universal lower secondary, and another 10 years to reach upper secondary.

And these lines actually relate to the sex, as well. So the solid line are men, and the dotted line are women. So we can see, at the beginning, a great deal of

disparity that quickly narrows. But the men achieve universal education sooner than girls or women. But we see that narrow quite sharply.

So I guess the main point there is that it does take time. And when we look at the example of Pakistan, on the right, we see it maybe not for primary education, but for lower secondary and upper secondary, having the same starting point as Korea, practically at the same time. So we can compare developments across those two countries.

And what we see, again, are sharp gender disparities from the outset. But we see, really, a remarkable growth in terms of girls' access to, especially, lower secondary education. And, in fact, what we see in the later, or more recently, is actually a downturn in terms of boys' or men's attainment of secondary education, and really strong growth among girls and women.

What we see in terms of legal frameworks, that they're changing, as well. And this also underlies some of this growth in terms of secondary education that we see globally.

This looks at the average number of years that are compulsory in countries. This is by country, so it's not weighted by the number of children in the country. So it takes the country as the unit of analysis. And we see, in the last decade, we actually see it increasing. So countries are expanding, extending, compulsory education more and more into the lower secondary or into the secondary level.

And just to give you a visual, if we just take six years as an average for primary education, then we can really see that, yes, in fact, many countries are extending well beyond primary education. In some cases, just barely -- around seven years in Sub-Saharan Africa or South and West Asia -- but almost 11 years in North America and Western Europe. So we see that, actually, in fact, lower secondary, in terms of legal

frameworks, is becoming the norm.

But it's important to look at implementation. We know that policy design is an important condition, but it doesn't mean that it's necessarily fulfilled.

And let me just quickly walk you through this chart. If we start from the left-hand side, in the light blue, and start from the top, this graph represents all of the lower secondary-age children in the world, by the region which they live in. The light blue bar means that they live in a country where lower secondary is compulsory, and where gross enrollment ratios are almost 100 -- more than 90 percent. So very close to having the capacity to serve all children in the country.

And so it's no surprise we see, for example, North America and Western Europe as almost all children live in such a country. In Central Asia, as well. But as we move down, we see that, in fact -- we see two patterns. First of all, we see that there's countries where lower secondary isn't compulsory. And in Sub-Saharan Africa that applies almost to half of the children in Sub-Saharan African -- 45 percent of the children of lower secondary school age live in countries where lower secondary is not considered compulsory.

But then we can contrast that with South and West Asia, which is just below Sub-Saharan Africa, where a strong majority of children live in countries where lower secondary is compulsory, but that they're far from reaching it. So, 72 percent -- three in four -- children live in a country where lower secondary is considered compulsory, but the commitment isn't met, so that there's a shortfall.

And we see this when we look at country-level data. We see that, in fact, countries that have the compulsory education, the enrollment rates range from 20 to 50 to 70 percent. So it doesn't mean that having a legal framework means that all children are attending or have the opportunity to attend.

Okay, so I want to turn to equity, as Kevin mentioned, that was one of the key issues for today, and look at some of the differences between sub-groups of the population, in terms of access to education. And I want to look at primary, lower secondary, and upper secondary.

So let's take first the case of Egypt. This is based on 2008 DHS data, household survey data, which we were able to disaggregate. If you go from left to right, we have population groups like boys and girls, urban-rural, and then the five income quintiles based on household assets.

And when we look and primary education, we see, at the aggregate level, at the national level, very little differences. It's almost universal, primary, and it's very well distributed across groups. Now, we know this -- in Egypt, we know this might not be true in certain districts, but at the national level we see a lot of parity.

But now, when we move to lower secondary, we start to see some disparities emerge. And I think it's no news that as you move up the education system, that disparities increase. I think we see this in practically every country in the world, in developed as well as developing countries.

But now we're starting to see a difference between urban and rural, that location makes a difference in terms of access, of participation in lower secondary. And at the right, suddenly we see now a progression from children living in poor households having a participation rate of 72 percent compared to those in rich households -- the richest, at 98 percent. So that's starting to develop.

And then we look at upper secondary, of course the participation levels, in general, have gone down. But we see the disparities becoming quite sharp now. And suddenly now we start to see disparities by gender, as well. So, differences between girls and boys, and very significant statistical differences by location, and by wealth. And, in

fact, when we look at it by wealth, now we see that the participation rates are twice as high among children in the richest quintile as compared to the poorest quintile.

We can look at it another way, as well. And this is based on a household survey from Cambodia in 2010 -- also a DHS. This takes a population pyramid. So, for those of you who are demographers, you'll recognize this.

But what we're looking at here is participation. So if you look at the bottom of the chart, those are six-year-olds. And that bar represents the participation rate among the children of the richest quintile versus the poorest quintile.

So you can see already, at the entry into primary school, that the poor children are less likely to begin school at six years of age. While we look on the left-hand side, that it's practically universal among the upper quintile.

We also see that it actually extends well into the secondary ages, in terms of primary participation. If we look at the poorest quintile, we see that it goes up to age 17; they're still in primary school. So it's not allowing them to enter secondary education.

So we already see disparities at this level, but what happens when we look at secondary? So when we look at secondary, we see that, in fact, many children in the richest quintile start on time, and there's high rates of participation. This is for lower secondary -- certainly not universal, but substantial proportions of the group. And on the poorest quintile, we see, then, much narrower opportunity. And then at upper secondary, then it becomes even more marked, the disparities, which is suggesting, obviously, that there's obstacles -- as you move up in into secondary education, these obstacles are becoming greater for children facing disadvantage.

Now I'd like to move on to spending. Costs are a big part of this equation. We need to think about how these costs differ across -- okay, I'll try to move

along -- how these costs differ between different sectors of the education system.

And here -- there's a lot of information there. It's basically looking at the allocation as a percentage of GDP across the different education sectors -- primary education, secondary, tertiary. And what we see is, we see several regions stand out as actually spending more on primary education than secondary education. And it's not only related to the level of development, it's not only Sub-Saharan Africa, but we also see it in Latin America and the Caribbean, and also in Asia.

And when we look a little bit closer, we see that part of the explanation is around the kinds of costs, then, that are passed on to households. And as you can see here, I think very interesting patterns. For example, in the case of Sub-Saharan Africa, where the greatest household contributions at any level of education is at lower secondary -- not at higher education, not at upper secondary education, but actually lower secondary. So the actual entry into the secondary education system is very much determined by ability to pay those costs.

And we also see very high rates of support in Latin America and the Caribbean, and also in East Asia and the Pacific, but a little bit more moderate. So we see a lot of private expenditure.

Costs are also important if we're looking at what the options are for extending secondary education. We can see in this chart -- this is looking at the public spending per secondary pupil as a percentage of GDP per capita. And it's also looking at secondary gross enrollment ratios. So those countries on the left of the chart have low, have small secondary sectors. Those on the right have more developed sectors.

And what we see is a great variation in costs on that left-hand side. In some countries, it's quite enormous -- Mozambique, Burundi -- while in others it's very minuscule -- Guinea, Madagascar. And then you see countries in the middle, which

actually line up a little bit more with what we see at the global level.

And so this has a lot of implications, what's driving the variation in the costs. Is it about quality? Is it about the role of the government versus the private sector in supporting secondary education?

So I'll just kind of present some of these -- try to present a summary, then, of some of these key policy issues. And by no means am I covering them all. You'll find a more detailed discussion in the report. But I just wanted to touch upon a few in this presentation.

First of all, that we see very few defined goals or targets for secondary education. They do exist, but rarely. But what we see is an interest and a demand for indicators around lower secondary education post 2015. But that should be brought to the table along with issues like equity and quality. People want to see the sector represented in the next round of goals and targets.

That there are legal frameworks for compulsory education that include secondary, but there's very spotty record in terms of implementation.

That education disparities widen for all groups. We knew this already, but to look at some of this data to see the magnitude of these differences I think is quite telling -- and quite important for any kind of effort to widen participation.

I haven't talked about teachers at all, but I hope that teachers come up in the discussions. There are important differences between teachers at the lower secondary level versus the primary level. Certainly, subject matter teaching becomes important in secondary education. And that means higher costs. But it also means that teachers require specific qualifications or training.

And I haven't talked about quality. I've said very little about quality, and education quality certainly is a big part of this. And we know very little about it -- Apart

from some of the international studies. I think that's really a gap in both data and our knowledge.

And then, finally, in terms of the costs. Who should pay for secondary education? What is the balance between public and private contributions to secondary education? What's the balance across the allocation of funding across the education system?

So these are some of the issues. I hope you have a chance to pick up the report and have a look. Please visit the website. There's more information, some deeper analysis of the data, and a great deal of data that breaks down the sector between lower and upper secondary, and so on, that I think you'd find useful.

Thank you. (Applause)

MS. CARDOZA: Ready to start? Good morning, everyone. Like Kevin said, I'm Kavitha Cardoza. I just wanted to talk briefly about the discussion so you know the direction in which we're going.

I've asked all the panelists -- I'm hoping this will be very focused. Usually, when I go out and report, the longer someone speaks, the more I have to log-tape. So I'd like to keep it really focused.

Everyone in the room, I'm sure, has gone to education meetings that go on and on. So I've asked -- and are very theoretical. So I've asked the panelists to give us very practical examples of what they're talking about.

And I think that in the beginning I want to focus on the challenges and the problems, and then when we get to the question and answer session, just when you think there's absolutely no hope, we'll talk solutions and kind of move that forward.

So, Albert started off with some of the challenges, and I thought was really detailed.

Let’s move on to Owen -- so, in America, it just seems to be, this is what everyone does. Right? We go to school.

In developing countries, how is this different? How do you get, kind of, the notion that school is important across, when maybe that’s not what everyone does? What do you see in your work as the challenges?

MR. OZIER: Exactly. Well, thank you for that, Kavitha. And thanks again, everyone, for coming.

So, much of my work is in Sub-Saharan Africa. It’s in East Africa and Kenya and Uganda, in that region. So, much of what I see when I look at the global education picture is seen through that lens. And so I’d like to tell you a couple of things that, through that lens, make education in developing countries quite different from education systems that you might be familiar with.

So the first of those is the multi-linguistic environment. So, in Kenya, for example, most children are reading textbooks that are in Swahili or English. And that all makes sense, until you realize it is not their first language for almost any of the children. And so one of the great successes of the education system -- and I think the graphs that you showed us give a lot of hope that education is expanding around the world -- but if you start out with a family where the adults don’t yet speak English, or Swahili, or a national language, more broadly, in the world, and then the children start off without speaking that language -- and yet they’re forced to read a textbook, or try to, that’s in a language that they practically don’t understand -- Imagine trying to learn math in a language which you barely speak, or science.

So that’s the first thing that I think makes a lot of these systems face a very different set of constraints than we’re used to.

Another is -- again, when we think about constraints and barriers to

education, you want to think not only about what individuals face, but also what systems face. And what systems impose, versus what individuals just choose. As you said, sort of, what's the cultural expectation?

So, again taking Kenya as an example, lower secondary, for example, is seen as part of primary school. The first eight years of education are primary school. But at eighth grade you take an exam. And half of the kids don't pass that exam. And you have to pass that exam if you'd like to go on to any more education.

So right away, if you look at the gross enrollment ratio among, let's say, 16-year-olds, it's not that all of them said, well, I just don't feel like continuing with school, it's that a lot of them didn't get that opportunity. So that's a constraint that individuals see as a barrier, but that's coming from a system that is, itself, quite constrained. And I think some of the things that Albert didn't have as much of a chance to talk about are that teachers are much more expensive. You need a much more highly skilled teacher at the secondary level than you do at the primary level.

So, I've mentioned the linguistic context, and the transitions. In terms of the sort of the expectations that people have, I think we see it vary a lot around the world. And so in some of my work, I've seen that students are, in general, quite excited, in rural areas in East Africa, to continue on to secondary education. And then it's a question of the financing.

And so I think we saw that graph where, in particular in Sub-Saharan Africa, lower secondary was actually, strangely, this point where a high fraction of the cost of education actually had to be borne by the families, and wasn't being borne by the state.

That said, it's still way cheaper than tertiary education -- okay? It's way cheaper than the highest levels of secondary education. So, you might pay thousands of dollars for a university, while you might only pay a hundred or two hundred dollars for

secondary education per year. It's these higher tiers of education just are getting much more expensive.

So even those hundreds of dollars turn out to be a pretty significant barrier for people in rural areas in Sub-Saharan Africa. But people are trying. And so that's -- I'll talk a little bit more about, later on, what I see kids doing when they get that opportunity to go to secondary school.

And there's been some innovative sort of approaches tried in getting teachers who have those skills into the rural areas -- where they might not choose to live of their own accord. Most of the exciting employment prospects for people with secondary schooling and university education are in the big cities.

So, in terms of setting up secondary schools and expanding that, I think one of the things we've seen is quality is really hard to maintain, even for primary education. So university primary education is getting much closer to being achieved, but the quality at which it is achieved is much harder to control.

And so we're seeing that as these systems get very crowded, the classrooms are bigger, the student-teacher ratios change, and those problems are only exacerbated in the context of secondary schooling. So I'll talk a bit more about it, but I wanted to just sort of outline some of the ways in which these systems really are in a very different environment than what you might have expected.

And so taking apart these numbers of gross enrollment ratios, and fractions of costs borne by different people, you really have to think about a lot of different constraints that the systems face. And it's expensive. And so we'll talk a little more about what are the exciting ways we're trying to solve those problems.

MS. CARDOZA: So we'll move on to John. I don't need to call you Sir John, do I?

SIR JOHN DANIEL: You can call me Sir John or John.

(Laughter)

MS. CARDOZA: Okay.

Talk a little bit about some of the challenges you see.

SIR JOHN DANIEL: Well, we're concerned with the how. And I think the first point I'd make is that I think the categorization between levels and types of education that maybe works at primary, completely breaks down at secondary. Kids of age 15 are looking for some way of improving their lives. And they don't really care, what it is, provided it does that. And also, I think the whole system has been completely fixated on the model of the classroom -- which, again, is fine at primary, but is not at secondary.

One of the figures that I've used -- I wrote a book a couple of years ago about the consequences of the success of the universal primary campaign, which is to create a tidal wave of kids heading to secondary -- and the consequences of the failure, which is the fact we need so many more teachers. So half of the book is about what do we do about the tidal surge of secondary children, and what do we do about the shortage of teachers?

So what we're campaigning for is an approach that uses the technologies of distance learning and so on to try and expand the availability of education at secondary level -- not just as sort of safety valves for the system, but as an integral part of the national system. Because now that education systems are trying to introduce information and communications technology, they need some sort of a central hub to help that, which open schools can do.

This is a relatively unknown aspect of secondary education, despite the fact that in many countries it's very considerable. And you take a big country like India, not surprisingly, there's a national open school that has 1.5 million pupils, and state open

schools being set up in most of the states, which number their pupils in the hundreds of thousands. Fine. India. You'd say, well that's good. You know, economies of scale.

But Namibia, small country, with a population of about 2 million, 40 percent of all the children in secondary school are in the Namibian College of Open Learning, which accounts for 28,000 pupils, 42 percent of the secondary population -- but a very much larger proportion of the upper secondary.

And I think one of the advantages of open schooling is that it helps to provide the kids with what they need when they need it, to break down the distinction between formal and non-formal, to break down the distinction between skills acquisitions and academic, to reduce inequalities, because it tends to cover the whole area, and can deal with kids who drop in, and then go and sew footballs for a month, and then come back in. So that's really where I'm coming from.

And I think it's obviously a challenge for the people who study these things, because they like to have things in categories. But my main argument is that kids age 15 in Africa, South Asia, don't fall into these categories. And you've got to do something to help them.

MS. CARDOZA: Kevin. Tell us what do you think of the challenges that haven't been covered.

MR. WATKINS: Thanks, Kavitha. You can call me Sir if you want to.

(Laughter)

Well, I'd make three points in relation to this discussion. The first, I think, is the elephant in the room, which we haven't really discussed, which is household poverty. And I think there's a tendency, when we look at education data and education problems, to assume that the solutions are to be found in the classroom -- better teacher training, better delivery, build schools in a different way.

And, I'm always very struck by these debates that you have in the United States, these Sputnik debates that happen every two years when the PISA results come out and the U.S., it turns out, is doing less well than Shanghai, or less well than South Korea.

Now, if you take the schools in the United States that have poverty rates in their districts of less than 10 percent, actually, the United States is top of the PISA ranking and the TIMS ranking. If you take the schools with 75 percent poverty in their districts, it's second-to-bottom out of 34 countries.

And I think that both tells you something about poverty as a barrier to education opportunity in this country -- which often gets swept under the carpet -- and its link to very real policy issues. Wehad a report out yesterday by the Education Department pointing out that pupils in high-poverty districts are getting less financing per capita than in wealthier districts.

And precisely that situation is mirrored in the poorest countries. We're talking here, in the lower-income countries that Albert was describing, of countries with child-stunting rates of one-third-plus. We're talking of kids from families, the one billion people in the world who live on less than one dollar a day, whose parents can't afford basic health costs, basic nutrition -- let alone putting their kids into school.

We're talking about attitudes to girls' education. Notnot all of these barriers are financial, or about where schools are located. In many societies, the hard fact is that parents and society values the education of a girl less than the education of a boy. And this is all wrapped up with cultural and social issues.

So I think the successful countries in secondary education have tended to be those ones that attack poverty, and integrate education into wider poverty-reduction strategies.

The second concern is inequality. And to take one country that Owen mentioned, Kenya, one of the great paradoxes of the Kenyan system is that the best parts of the secondary education system are public. So the top tier of the public education secondary school system in Kenya is very good, produces very strong results, better than the private sector -- but access to that tier is almost entirely through private primary schools. So if your parents can't afford to send you to a private primary school, you don't get access to the highly subsidized public -- with high levels of public investment -- secondary education. And I think that demands that we look at equity in financing far more seriously than we have in the past.

And a third area, I think, is about the system itself. I think we all -- there's a tendency in the United States that everything these days is about blaming the teachers for failing children. But in every society, we have to look at the conditions under which teachers are trained.

Now, when you have countries with the sort of education profile that Albert was setting out, where you have maybe 30 percent of the population that get through primary school, where do the teachers come from? And so, you know, there's a sort of cumulative problem here. If you don't have enough teachers to respond to the surge that Sir John was talking about, it's not easy to expand secondary education while at the same time maintaining quality.

And I think that is why it's incumbent on us to look at the sort innovative approaches, and the role that new technologies can play, the sharing of technologies, in expanding decent quality secondary.

MS. CARDOZA: I wanted to move on to more of a discussion, and something, Kevin, you talked about, which is female education -- which is a much bigger deal in developed countries. I was born in England, but I grew up in India. And

celebrating the Day of the Girl Child was a huge deal. It was a big celebration there.

And I read in the report, secondary education can also equip girls with skills to expand their choices, increase decision-making in the home, and participate in social and economic life. And in a lot of developing countries, in certain segments, that is precisely the reason girls should not be educated.

So I wanted to know if, girls should not have these opportunities? That's for men. Men are the breadwinners.

So I wanted to start a discussion about what are some of the particular challenges you see with girls?

Albert, would you like to jump in?

MR. MOTIVANS: Yes, I guess. it's a broad area. And I think there it's generated quite a bit of interest, again, recently, to kind of, renew, address the issue again.

But I think a lot of people are thinking well, we've been through the research, we know where the issues are. Whyaren't we able to actually implement something? And I think that oftentimes, that that's where the obstacle is. Or that's the issue that needs to be addressed, is much more about implementation. Because we've seen good examples, we've seen solutions.

In terms of secondary education, the case of Bangladesh, investing in the stipends for girls, from primary through secondary education -- you look at the indicator for Bangladesh now and you see, a great deal of parity. What happens outside in society, of course, is something different. But within education, there are equal -- there's a better chance at equal opportunities. What happens is that the stipends end at secondary, and then girls are much less like than boys to actually continue beyond secondary education.

But I think the issue is really about, then, how to put things in place, how

to move things forward, with the kinds of ideas or solutions that have, I think, been well articulated already.

SIR JOHN DANIEL: I think I've made the point that where you stand depends on where you sit. I had the interesting experience of moving from being Assistant Director General for Education at UNESCO, where gender meant getting girls into school in Africa, to become President of the Commonwealth of Learning, where I serve the 54 countries of the Commonwealth. And I was very quickly told by the ministers of education that I had to wash my mouth out, because the problem was not girls anymore, it was boys. In the Caribbean there is a dramatic problem of boys' underachievement in school. And that is moving to Southern Africa. And I think the graph that Albert showed about Pakistan shows that that is going the same way.

I know we mean to appreciate the problem of getting girls into school. But I think there is an increasing problem of the boys not finishing lower or, certainly, upper secondary, and the girls kind of taking over, because they see that as the route to go.

One interesting statistic, going back to my comment about open schools, is that the Indian open school, the National Institute for Open Schooling, which has recently been ramping up its vocational and technical education, actually has more girls doing that than boys. And that is extremely unusual, I think, in South Asia, in that area.

MS. CARDOZA: Do you know why that is?

SIR JOHN DANIEL: I think because they've really gone out to push it. And because it probably is more reassuring for the parents to have their daughters studying vocational and technical through a kind of open schooling system, which is, perversely, in some ways more local than it would be if they had to go through a conventional classroom system.

MS. CARDOZA: Owen, what do you see in Kenya?

MR. OZIER: So I would share a couple of anecdotes.

So, one is, thinking back to the systems that impose constraints -- the governments are quite limited in their budgets, and so the chance that you're actually going to get into secondary school -- whether you're a girl or a boy -- may not be that good, especially if you're coming from a poor background, where you haven't had the opportunity to get that kind of expensive, high-quality primary education that would get you into those best schools.

So you're sitting there thinking to yourself, as a sixth-grader or fifth-grader, what are the opportunities that I really face? It's at this point that, in Kenya, for example, a nudge can be pretty valuable.

And so a few years, some of my colleagues, and my faculty advisors back when I did my dissertation, did a study where they gave girls a little prize if they would do just a little bit better in school. It was a cash prize that was commensurate with, sort of, the cost that they face on a day-to-day, month-to-month basis, $15. So, in terms of a policy, it was quite inexpensive to implement.

What they said is, we'll give you this $15 if you, as a girl, turn up in the top -- I think it was 15 percent of girls in your district, in your grade. I think it was fifth grade. And they would give a few dollars to the teachers, as well. So it was sort of a team incentive. But because it was at a district level, it wasn't, I'll give you a prize if you'll be the best in your class. Your whole class could have several more people win, if you worked together -- okay?

And the design of the incentive worked really well. So a couple years later, we see girls doing much better on the tests. And, in fact, the boys were competing with the girls -- they couldn't be outdone -- and so they actually did better, as well.

Years later, we see that performance gain persist for the girls -- who were given this very, very small incentive. So a nudge at the point where you're sitting there weighing your options, a nudge can be very valuable.

Another anecdote from -- and so that's from rural western Kenya. Go to the favelas in Brazil, in Rio or elsewhere, and you find a very different environment, where there are a lot of opportunities for teenagers to do a lot of things that are not educational. And this is the sort of environment where parents are really struggling to keep their kids in school. The government is really struggling to keep kids in school. And part of it's for education; part of it's for their physical safety.

So conditional cash transfers have actually been very successful. And when parents were sort of interviewed about what piece of the conditional cash transfer -- so a conditional cash transfer is if the kid stays in school, let's say if they're attending 85 percent of the time, the household will get a monthly cash grant -- okay?

We tried to -- and this isn't my work, this is the work of Leo Bursztyn and UCLA -- he went and he tried to figure out why is it that this conditional cash transfer is so valuable. Is it because of the money? It's relieving a constraint on the household, the kids don't have to go out and work? What is it? And this really depends a lot on the context.

And what he found, in the favelas of Brazil, was that it really had a lot to do with information. The parents couldn't tell if the kids were in school. If they would just get a text message on their mobile phones -- they're all very poor, they don't own almost anything, but they almost all have mobile phones -- if they would just get a text message that would tell them whether their kid was there that they, that almost forgoes the need for the cash at all. So it's this game between the parents and the children.

And for girls, in particular, the risk is teen pregnancy. And the parents

want to preserve the options that the girls have for their future. And that conditional cash transfer was giving them the information of whether their daughters were staying in school.

In Kenya, we don't see it as much of a game between the parents and the students. We see it more where, if a girl is given the opportunity to go to secondary school, she's going to delay teen fertility. And so she's going to change, sort of, the trajectory of her life of her own volition, by and large.

So those are sort of the big-picture trends, and they depend a lot on the context.

MR. WATKINS: In some ways I think we're skirting around the very direct question that you ask.

And there's an argument that Ama Chu Sen often uses when he's talking about girls' education in South Asia, and he cites a proverb, I think from Mysore, if I remember. But the proverb says, "Educating a daughter is like watering another man's garden." And, that's a very uncomfortable image that that creates.

But I think, at a certain level, it captures what you're describing. There are attitudinal things that go on in families, over and above what goes on in the education system, that shape educational opportunities.

And, actually, I make a habit when I visit countries in Africa of finding books on local proverbs. And actually most of them tend to have a proverb with a sentiment that's somewhat similar.

MS. CARDOZA: Just to explain that, watering another man's garden, because a girl would get married and leave her father's house and go to her husband's house. So then she's kind of their property.

MR. WATKINS: And so the argument is, you're making an investment,

the returns of which are being transferred to somebody else.

Now, I think, in many contexts -- if you look at northern Nigeria, where, a tiny minority of girls get through more than one or two years in education in poor rural areas, there are very deeply ingrained attitudinal barriers to equalizing opportunity in education.

And I think the response to that is partly political leadership, and local leadership, that we need political leaders to stand up and say these attitudes are wrong, we need to challenge them, we need to change them.

But I think, also, as Owen says, that there are things that you can do through incentive systems to break these down, like creating incentives for keeping girls in secondary education, like the Bangladesh example.

And those incentives are particularly important for the poor. Because if you look at where the real disadvantages are concentrated, it's not -- people aren't girls, rural, poor in separate boxes. It's the three things and the way they interact together. But, the poverty can often magnify these cultural barriers because of the constraints that households are operating under.

And I think equitable public spending and incentive systems can play a role in breaking it down.

SIR JOHN DANIEL: I think we've talked about poverty of the people, tending to take the cost of the schooling as a constant, which I think we've got to challenge.

No one has mentioned the important work that Keith Lewin has done on the comparative costs of secondary education compared to primary. He's studied this in a number of countries and, in fact, one of your charts showed that in Africa -- but you didn't compare it to primary -- the relative costs of secondary is much higher.

Lewin came up with a rule-of-thumb that if the unit cost of secondary education in a country is more than double that of primary, that country will never achieve universal secondary education. And in most of Africa the factor is at least 3, and in many, it goes up to 6, 7, 8. Whereas in the OECD countries, by and large, you're talking one to something less than 2 -- 1 to 1.8, or something like that. So, there has to be a terrific push to get the cost down.

Now, the problem is that the policies which would get the costs down of secondary are policies that are terrifically appealing to ministers of education -- like reduce teachers salaries, like make them work a fuller timetable, and so on. And this is, again, where the open schooling approach, I think, has terrific promise. Because there, you're talking about costs that are something like one-sixth or one-tenth of the cost of secondary conventional schooling in that country.

And, obviously, if you're talking about people who are poor, then the costs that they have to face in undertaking secondary are very important. And that may also be why some of these open schools do a very job of recruiting girls, because the families see that as a less expensive option, and therefore more appropriate for their girls.

MS. CARDOZA: I think we're almost at the time for question and answer. So if we can start with that.

If you'd try and keep your questions very focused. If it's directed at one of the panelists, that's fine, otherwise just a general question is fine.

I think there are people up and down the aisles with mics.

And if you could introduce yourself before you ask your question, please.

MR. MUSKIN: Joshua Muskin, from the Aga Khan Foundation. I've got two basic reactions that I'd like to make.

The one is, looking at the example of Mozambique as a case of success

in achieving, I hear often, in primary enrollment. And today, for the first time, I heard as a model to look at for secondary.

And I started working in Mozambique this year. And it just doesn't jibe, between the commentary of Mozambique as a model, and what I see in the classroom, what studies that we've done with AED, for example, that show that in the northern province, over 50 percent of, I think it's grade-two or grade-three students, could not read a single word. And looking opportunity-to-learn measures, 18 percent of the available class instructional time was actually learned.

So I'm really nervous about presentations such as this that look at the big, macro numbers, and see such a disjuncture between the optimism that they permit us, and the reality on the ground. So, whoever wants to react to that.

And then, just quickly, virtually no mention of what we want secondary education to accomplish for us. Sir John touched on that. But, getting kids in the classroom is going to do nothing for us if we don't have the classroom providing education that is actually going to serve them to meet some of these aims that we're talking about.

And just one last quick reaction. I think we really dis-serve ourselves in countries where we're working when we only talk about the formal delivery when we're talking about secondary. And I think Sir John touched upon the alternative delivery. And I'd just encourage all of us not to exclude that part of the equation when we're having these discussions.

Thank you.

MS. CARDOZA: Let's start with the Mozambique example.

We had talked earlier, a little bit, about data collection, and problems with data, and problems with what's actually happening on the ground, and what is actually being reported.

So, Albert, why don't you jump in?

MR. MOTIVANS: Okay. Well, it's a little bit about fitness -- my argument would be more about fitness-for-purpose, and how you use national aggregate indicators. And I certainly wasn't trying to ascribe any achievement to Mozambique, other than they've been able to increase the volume of children in secondary education from one year to the next. I think I also mentioned the early-grade reading assessments, although not mentioning about Mozambique.

But I think you have to remember that -- my job is really the first page of Google Earth.It's far, far away from a country level, from zooming down to a school level, where context and this kind of information helps to inform, the policy at the national level. It's really to get that kind of global picture, in a way. And by no means is that sufficient to, to answer policy questions.

And I don't think that was presented in a way as a successful story -- or, at least, it wasn't intended that way. But I think, certainly, one would have to look at the quality and the outcomes of the system in order to make any kind of judgment like that.

I do want to come upon -- I thought that was a very good point about looking at -- well, sorry, it's maybe about reframing the question, in a way. And I think I've kind of presented data which really looks at, like, formal secondary education as, the main route, or the main issue to address.

And I would agree very strongly that we should be maybe looking at the age group instead. And looking at different solutions, but focusing on an age group. Because I think this is really the most neglected -- this is, I think, probably one of the failures, I think, of the -- whatever -- Education for All, or MDGs, or this kind of focus, which has led to a great focus on primary education. It's that once these children get out of the primary school age, then they're no longer -- they no longer count, in a way. All the

focus is on primary education, so once you become 12, 13, 14, kind of that interest is gone.

And I think one thing that I hope comes out of this reassessment, and looking at, what needs to be done post-2015 is that, this group becomes a target, and that there's a range of options, both formal and non-formal. I think we see in Africa most of the children leaving primary school going into non-formal apprenticeship-type program -- on the boys' side.

So I think that is a very important point to make.

MS. CARDOZA: What are some of the ways in which different countries are trying to make secondary education relevant -- whether it's, career track, technical, or --

SIR JOHN DANIEL: Well, I think that that's the big push. That's what ministers of education are sort of high on these days.

But it is actually extremely difficult. The technical vocational system tends to be a very conservative system. We're working with 10 polytechnics in Africa to get them to, A, use more non-formal ways of teaching technical-vocational, but, B, to try and focus that technical-vocational on the informal economy, where 80 percent of the people are going to be working anyway.

And it is very difficult. We're making steady progress, but there are terrific sort of prejudices to be overcome. No, you can't do that except in my workshop -- this kind of attitude.

But I think what the open schools are able to do,the great advantage of having a large-distance learning system is that you can do things really fast, on a really big scale. And those systems are now getting the message. As I said, India has done, and has really led the way in the Indian secondary schooling system to really ramp up

technical-vocational education.

So it can be done. But it's not easy, because the mental shifts you have to make, I think, are in many ways even greater than in more academic forms of education.

SIR JOHN DANIEL: We've got lots of questions.

MS. CARDOZA: Yes. Let's move on to the next question.

In the purple?

MS. JHOTTI: My name Shofina Jhotti, from the National Education Association. I have three questions, and they go to Owen, the Kenyan situation.

My first question -- being on the ground, I have a question about the contradiction that Kenya has in terms of an oversupply of trained teachers, and a severe shortage of teachers in the classroom. How do you see that? And how is government responding? And, of course, the World Bank, on how to achieve quality education?

The second one is the Kenyan government, I believe, in 2008, 2009, started free secondary education, which really was a good move towards putting, or getting access to those who cannot afford to go in. What, impact, in terms of access, has this one had?

And also my last question is, as you on the ground in Kenya, there's a recent phenomenon of uncontrolled expansion of private primary education that is really of low quality, from private proprietors. And that has had -- to utilize teachers who are not trained, they are normally secondary school-leavers.

So what impact does that have, the quality, and the transition into secondary education?

MR. OZIER: Well, thank you for those questions.

I want to take an opportunity to talk a little bit more broadly, not just about

Kenya, but thinking about the costs of schooling. And something Sir John mentioned, the work of Lewin, and noticing that, the ratio of the cost of secondary schooling to the cost of primary schooling per year in the United States is a very small ratio, but in developing countries is often quite large. Secondary is much more expensive.

And I want to give you all at least one insight as to why that is.

If you go to a rural area in a tropical country, the price of an avocado or an orange, denominated in U.S. dollars, is something like a nickel. Maybe it's a penny, depending on the harvest season. If you get the cost of a computer there, it's still a thousand dollars, or $500, what it would cost here.

The orange is priced in local labor, and the computer is on the international market -- okay? If I want to -- I was told once, living in one of these places, that I shouldn't buy a hammer if I want to put something up on the wall. I should hire a guy who happens to have a hammer to come over and put something on my wall. It's much cheaper. And that's true.

And that's primary education -- okay? The guy with the hammer is primary schooling. That's much cheaper than the people who are trading their labor on the international labor market. And that disparity is a function of the wealth of the country. And it's sort of mechanical, this pattern that Lewin has found. And so that's -- I think what that does is it pushes the question back to economic growth. And I think that's where, ultimately, it's going to need to be.

But it response to your specific questions about Kenya, the universal secondary education push that Kenya made starting in 2008, it's had some effects. But in practice, it has not made secondary education free, or even anything close to free. So we still face the two big constraints that I mentioned in my earlier comments, one of which is getting in, and the other of which is having the money to pay. It still costs hundreds of

dollars for most people. And that's more than most people have.

The second -- let's see. I took notes as you asked your questions --

MS. CARDOZA: Private primary schools.

MR. OZIER: Yeah -- private primary schools, and sort of low quality, and then there's this oversupply of teachers, and yet a shortage in the classroom. I think the oversupply issue we see a little bit more at the primary level, and the low-quality issue of some of the private entrants to the schooling system -- you have to strike a careful balance here. And I think it would be glib to make a quick policy proposal.

But let me give you an example. Shortly after the push for universal primary education, in 2003, in Kenya -- and we've seen many pushes like this in other countries in Sub-Saharan Africa -- classrooms swelled with the populations of kids who had been out of school but now learned that they should jump in. So they weren't all six years old, some of them were 10, some of them were 10, 12, 13 -- but they were all in first grade. So you have this huge room full of first-grade students.

Some of these trained teachers, who were on the street, basically, without government jobs because, in this sort of environment, a government job is practically a permanent job, and very well paying one. So the communities were prepared to raise the money to hire those out-of-work teachers at below government salary. Okay? And so they hadn't been vetted by the government system. They hadn't yet been offered a permanent job. But they did fantastic work. Okay? And that's the sort of pattern that we do see around the world. The people who have some of the training to be a teacher at the primary level can do really, really excellent work when they're responsible to the community. That's true in India, that's true in Kenya. In India there was a program called the Balsakhi program, which brought tutors in. And that's being tried right now in Ghana on a larger scale.

So, I think that when we think this sort of interaction between the private and the public sector, and you think about the quality, I think this is a much bigger issue right now in primary schooling than it is in secondary, where you're moving towards a much higher skill level of teachers, and a much higher sort of capital intensity, with inputs.

So let me leave it there. But let's talk more afterwards about the Kenya context, in particular.

SIR JOHN DANIEL: But could I say, it's not just the community putting the pressure on, it's the management of the school. Let me make myself really unpopular with Kevin by mentioning James Tooley's book, *The Beautiful Tree*, which is about the growth of private schooling at primary level, primarily, which people hadn't really noticed until he suddenly blew the lid off.

Now, the fact is that these schools, in many cases, are not hiring teachers who are as well qualified. But since they make them work hard, they get much better results than in the state schools, where the teachers are qualified but don't show up for work -- not surprisingly.

MR. WATKINS: Well, thus provoked -- (laughter) -- I have to say, James Tooley, for people who don't know, is a professor in New Castle University. And actually, I think his work is a rather sad indictment of the state of higher education in my own country in many respects.

And I'd make two points about it. Which is, first of all, it's not the case that until he came along and observed large numbers of private schools in slums and rural areas in Africa, that nobody knew they were there. If you look at the PROBE survey for India, if you look at work on Lagos, going back 15 or 20 years, in slum areas, there are countless studies that were observing exactly the same thing.

Now the question is how you interpret the rise of private schools. And in

the case of Tooley, he interprets in the way that I think, many people in the debate in the United States do, saying this is expanding choice, it's parents voting with their feet to get out of the public system which is failing. And by creating competition between providers, we'll ultimately drive up standards.

The other way of looking at it is that the rise of these schools is a catastrophic state failure in education. It's a failure, which is shifting the financing burden from the state, from a progressive taxation system, onto poor households.

It's true what Owen says, that in the way that the free primary education system was managed in Kenya, and also in Ghana -- because you had this huge inflow, which the system hadn't prepared for -- many parents simply diverted, their demand out of the system. But, that wasn't inevitable. That could have been planned much more effectively -- as it was in Tanzania, actually, where there was an attempt to train enough teachers in advance to put them in the lower grades of primary school to prevent, pushing people out of the system.

So I think if we're going to debate private schools, we should have the debate on its merits, and really not cite some pretty spurious research findings as though they were some sort of absolute truth in this context.

MS. CARDOZA: I know there are a lot of questions.

So, the woman with the necklace. Do you still have a question? Okay.

I'm going to ask everyone to stick to just one pointed question, please. Because I'd like to get as many as possible. We don't have much longer -- right? How much longer do we have? Okay.

MS. KLEIN: Hi, Andrea Klein, development officer for several small non-profits in the District. I have a question with regard to partnerships.

Could you speak to the partnerships, primarily with NGOs, the

governments, and businesses -- with businesses pushing expansion in Africa, particularly, and Asia? Could you speak to those partnerships and leveraging?

MS. CARDOZA: Go ahead.

SIR JOHN DANIEL: Well, just one point, the whole basis of many of the open-school systems is partnership with NGOs. So, for example, the National Institute for Open Schooling in India has something like 3-1/2 thousand what they call affiliated institutes, which are actually NGOs who have an interest in children. They might be an interest in disabled children, or children who are on the street, or children who are in employment. And the partnership between these two bodies is a win-win in the sense that the NGO gets the opportunity to give education to these children, as well as what else they're doing for them, and the National Institute for Open Schooling gets a ready-made network around the country of places where children can assemble to study its work. So that's a very good example of partnership.

MR. OZIER: And if I could jump in, as well, this sort of notion of vocational training, and the less formal options that are available when it comes to sort of the teenage years -- I think there are a number of interesting partnerships around the world, where an NGO is trying to play the role of an intermediary to talk to businesses, and figure out what skills is it that they really need people to have in order to employ them. And sometimes that employment is closer to the informal sector, closer to sort of small street vendors and things like this, but that could be linked to larger businesses.

So then the NGO sort of tries to bridge the gap -- figure out what it is that the education system, as currently conceived, hasn't delivered to these kinds -- and kids broadly construed. They may be 20 years old -- and then figure out what it is that the business community needs, and try and give sort of a short-term burst of education, and then connect that to an employment program. And so there are things like this

happening in Sierra Leone, and in Liberia, and Tanzania, and Kenya, and around the world.

So I think there are a number of ways that the NGOs are sort of playing a very useful role in innovating when it comes to the sort of less formal mechanisms of education in these age groups.

MR. WATKINS: Well, just to say, I think it's a really good question. And I think it relates to something the colleague from the Aga Khan Foundation asked earlier, as well.

Because, when we talk about secondary schools and the development of skills, what we're really talking about, from the perspective of students, is the generation of skills that will secure them a decent job, in a productive sector of the economy.

And I think, on that question, really what we're discussing here is, if you like, a stock problem, and a flow problem. And the stock problem is the 74 million kids of lower secondary school-age who are out of school. There are many millions more who are out of school of, higher secondary school-ages -- in many cases, kids who didn't even complete a primary education.

Now, if you look at the most successful programs, like the Open School Program in Mexico, or the Jóvenes Programs in different parts of Latin America, the reason they've worked, I think, is because they involve very close partnerships between governments and the private sector in, defining the curriculum, rolling out the training, and so on.

And they have a very strong record on job creation, as well. The kids actually come out of these schemes having learned something, which makes them employable.

The contrast with the situation, say, in the Middle East, where huge

numbers of kids are coming out of secondary school systems, even out of university, with no prospect of getting a job -- and this is a context in which the private sector is virtually uninvolved in the development of curriculum and the rolling out of training. That's starting to change, and there's a lot of innovative stuff that's going on in different areas there.

And I think, in a way, it's the same story from the flow perspective. That is to say, kids who are now coming out of the primary school system, potentially going into the secondary school system, that in some countries in the world have been very successful at higher levels of the secondary school system, of bringing in work-based skills training. Germany does that very effectively. Japan does it very effectively. Brazil does it very effectively, actually. In fact, President Lula, himself, was a product of their school apprenticeship system.

So, I think there are a lot of interesting models out there. But the defining characteristic of most of them is that you have the private sector quite closely involved with government in designing courses that, if you like, are market friendly and employment friendly.

MS. CARDOZA: There was someone right at the back who had a question. Mm-hmm -- the gentleman.

MR. LLOYD: Good morning. I am Mr. Lloyd. I am a high school teacher in the state of Maryland. My question is about language education -- since you are talking about education.

Now, we have so many high school students who we promoted from elementary and middle school to high school, and yet they cannot read in correct and proper English. We have so many high school students who cannot comprehend what they are reading, who are very poor in spelling, very poor in grammar, very poor in most aspects of the English language. And we are talking here of English language. We are

not talking here of Korean, or Spanish, or German language -- or whatever languages.

And these are students from the United States. In fact, many statistics would rate that the United States is not even in the top 15, or the top 20, when it comes to standardized exam in English, be it in reading comprehension or whatever.

Now, being native-English language speakers -- and we speak English at home, we speak English in the community, we speak English -- and that's the only language that many of our kids have grown up, and yet they still cannot master it, even if they reach high-school level?

Now, my question is, in comparison with other students who speak other languages way back at home -- say, like Korean students, Indian, Filipinos, or what -- way back at home they speak some dialects and languages of their home, maybe two or three languages. And yet, in spite of that all, they can master the English language.

To cite some facts alone, even in the --

MS. CARDOZA: I'm going to have to stop you and ask you what is your question?

MR, LLOYD: My question is, how can we improve English language teaching from the basic, all the way to high school, here in the United States?

Thank you.

SIR JOHN DANIEL: Use it or lose it, I would say. The more kids use it, the better they are at it. And perhaps the problem is that often they're actually not using it much, in terms of either writing it or speaking it in a formal matter in their school systems.

MR. WATKINS: Well, I would just say that I don't claim to be any sort of expert on education in the United States, but I think the question raises a really important point, which does have parallels with a lot of developing countries.

And that is, when it comes to these -- if you like -- really foundational

skills in learning, of reading, and very basic numeracy, skills which, if you don't grasp them at an early enough age you can't build anything on it. So your ability to educate yourself as you're going through the school system is diminished.

And I think there are two parts to the story. Which is, first of all, you need good teachers in the early grades who are really equipped to deliver these basic reading and literacy and numeracy skills. And often, incentive systems don't work like that. The better teachers often turn up in -- end up in the later grades, especially in developing countries. The situation here, I don't know.

Secondly, you have to pick the proper mark. There's no picking the proper mark when kids are 12, 13, 14 years old. You need to pick it up when they're -- before they get into school, preferably, but certainly in the first couple of grades of school. And once it's picked up, you need to have a remedial instruction program in place, which involves resourcing, the proper training of teachers to do that.

And, actually, all of those things, I think, are neglected universally in education. Not just in the United States, but in many developing countries, as well.

MR. OZIER: And if I can jump in, I think we've seen very promising results of early, early childhood investments -- in nutrition, and in health, things that have nothing directly to do with education, for one-year-olds. Things like iodine, micronutrient supplementation.

In countries where we see, 20, 30 percent of children are stunted; you can see the disparity in education from the very beginning. And it's a pattern that we see that's true in rich countries, as well -- in the United States, in the United Kingdom. Kids who are behind by age five are going to stay behind for a long time, on average.

And so it's getting it early, and looking at this not as secondary schooling in isolation -- you can't read when you reach ninth grade -- but looking at the system as a

whole. And I think early childhood investments are key for that, whether it's in the United States or any other country.

MS. CARDOZA: Yes. The gentleman with the glasses.

MR. RHODES: Hi. Ken Rhodes from FHI 360. And I work on our Africa Education team.

And I want to ask the panel a question around models of programs that focus on relevance. I think the discussion around relevance is huge. I think, from a perspective of the youth who are going to school, and the parents who are sending them to school, they need to think about, well –- why, particularly in countries in Sub-Saharan Africa that are not going to churn out jobs. And we've been doing work with the public-private initiatives that one of the panelists discussed. Very interesting and promising.

But the real challenge is the non-formal economy. How does school -- and are there models of how school can be used to build skills and motivate children to be better farmers? Better animal husbandry experts -- et cetera. Because that's where 60 to 70 percent of the employment opportunities are in many of the countries we work in.

So, just want to hear from the panel on that.

Thank you.

MR. OZIER: If I can jump in with an anecdote from Kenya in response to that.

So, in my work, I've see that kids sort of disproportionately want to get into secondary school. They want to attend it if they can find the money to do so. They see it as a ticket to somewhere.

When I see these people in young adulthood, who have managed to get secondary schooling, a lot of them are still unemployed, still looking for a formal-sector job, or even and informal job that would at least be livelihood for them.

So I asked some friends, well why is it, do you think, that people are interested in learning algebra, when most of them are going to be, carrying a collection of watches and socks, and trying to sell them. Or they're mostly going to be working in subsistence agriculture? And a close friend of mine said, well, when I look for somebody to look after my cows, I actually look for them to have some amount of secondary schooling. They don't have to have a, have a great performance on the ends of secondary school exams, but I'd like them to have some. And I said, well, why -- what does algebra have to do with your cows?

And she said, ANo, no, no. It's not algebra, it's that the primary school system at this point sort of has failed us enough that I can't guarantee that they can add and multiply by the end of primary school. But if they've made it into secondary school, and they've gotten some of that, I'm sure that they've at least struggled with that enough that they're going to remember it.

So when I send the guy who's watching my cows to go get the medicines at the agro-vet, the veterinarian, I'm sure that he's going to come back and have read the instructions correctly. I'm sure he's going to know how many doses it is a day to treat them for whichever type of ringworm or parasite. I'm sure that he's going to be able to do the subtraction and give me the correct change, and not be swindled by the people he meets.

So -- numeracy and literacy are really key skills. And to the extent that we can't get them out of the primary schooling system, people are using the secondary school system to guarantee the presence of those skills in the labor market. But that's, just anecdotally, one of the things I'm seeing.

MS. CARDOZA: John?

SIR JOHN DANIEL: Alternative systems have an interesting dilemma. In

the book on open schools, I make a distinction between alternative, complementary, and integrative.

Complementary open schools simply teach to the national curriculum. So there is, there, an automatic brake on doing something that's different.

Alternative open schools, of which the Indian is one, are their own school boards, and therefore they can set their own curricular exams. And I think that's a much better way to go.

So, if you're going to set up an alternative system, give it some kind of freedom to design its own curriculum, and also be able to get into technical-vocational, while at the same time defining the curriculum.

Of course, my ultimate goal is the integrative open school, which is placed in the center of the whole school system, and suffuses it with new curriculum, new methods, and so on.

MS. CARDOZA: Kevin?

MR. WATKINS: Well, I would just add, I think we need to be careful about what we define as a relevant skill in this context. Because in today's job markets around the world -- markets are becoming much faster moving, demand patterns are changing, and so on. So children need transportable skills, and transferable skills. And a lot of those skills are to do with basic, cognitive development, reasoning of different orders, whether it's in numeracy, literacy, and so on.

And I think there are real dangers to compartmentalizing children into sort of more narrowly focused skills learning -- to be a welder or a bricklayer -- at a very young age. And I think that is one of the failings of a number of systems around the world.

From what I understand, one of the reasons some of the open school systems work very well -- the Mexican one, in particular -- is that it both takes children

who may have dropped out of primary education, and takes them very quickly through some of the sort of the basic literacy and numeracy skills, whilst linking them to employers in the employment market.

The bigger problem, I think, in a Sub-Saharan African or an Asian context, is 90 percent of the skills development that goes on happens through on-the-job learning and apprenticeship. And those systems aren't really integrated into the formal education system in any meaningful way.

MS. CARDOZA: We've got time for one more question. Why don't we take it down here?

MS. WOODS-MURPHY: Hi. I'm Maryann Woods-Murphy. I'm a Washington Teaching Ambassador Fellow Spanish teacher from New Jersey, working this year in the U.S. Department of Education.

My question to any of you is have you seen an increase in quality, in terms of access -- an increase in secondary school success in terms of quality or access in programs, or in plans, which include community, teachers', and students' voices in designing their own learning experience?

Is there any correlation between that sort of engagement, and success, as any of you would define it?

SIR JOHN DANIEL: Well, all I can really say is that the open schooling system is so buried in the community, that -- yes, the answer must be yes, because at the local level, where the study centers are, it's very, very much community based. So any success these systems have reflects the input of the community.

MS. WOODS-MURPHY: Teachers, as well? Teachers in those systems, as well?

SIR JOHN DANIEL: Yes -- well, again, the definition of teacher is

sometimes not perhaps what you and I might call a teacher with a degree and everything else.

But as we've said on a number of occasions, really motivated people, well managed, can actually teach kids extremely well, even if they don't have the diploma and education that we might recognize in the west.

MR. OZIER: But these are very centralized systems, in many cases. The curriculum is decided in the capital, and the teacher training is, sanctified in the capital. And everything's in the capital. So I think that a lot of the sort of creative diversity in decentralized sort of ways of doing things aren't nearly as present.

Nigeria, I think, would be a bit more of a counter-example, where the states are kind of quite independent. But those states are enormous, and so there's still a lot of central power, even in those contexts.

MR. WATKINS: Well, I did want to make a comment, but I don't feel I've got anything to add to that specific question, other than what Owen and -- has already been said.

But as a closing comment, if I may, I did want to say that, it's very easy to get down in the dumps when you look at some of the data that Albert presented, and some of the discussion we're -- not because of the way you presented the data -- (laughter) -- but because --

MR. OZIER: It was very colorful (inaudible)

MR. WATKINS: But, I think it's always helpful to look at some positive examples.

And to me, one of the outstanding success stories in developments in education in the last 10 years has been Brazil -- which has massively expanded secondary schooling, and primary schooling. It's gone 50 points up the PISA scale in

eight years, which is the second fastest rise in recorded history. Only one country has ever surpassed that. Many of the really big inequalities that were dividing rich and poor, the north of Brazil from the south of Brazil, have started to narrow.

And I think there's an awful lot to be learned from the package of measures that have made that possible. And, really, I think there are three.

One of them is a very strong focus on teacher training, and raising the quality of teacher training through the higher education system, and through the secondary school system. So they introduced, back at the end of the >90s, a special qualification for high-performing teachers, but then also provided incentives to get those teachers into the worst-performing schools in the country.

How did they identify the worst performing schools? By setting up a national assessment system, in which every child in every school was monitored and reported on year by year. So having a proper assessment system in place.

And I think, finally, by really focusing on equity -- that this was one of the most financially divided systems in the world 10 or 15 years ago. They introduced a system through which the federal government now transfers resources to the poorest districts, the poorest municipalities, which has started to equalize funding. And the same time, you had this very big program called Bolsa Escola, which was later rolled into a bigger program, which is a cash transfer to something like 12 million of the poorest households in the country. And that gave parents an incentive -- because the transfer was linked to the kids being in school, it gave them in an incentive to take them out of labor markets and keep them in the education system.

And to my mind, without wanting to resurrect the James Tooley debate, I think rather than coming up with what purport to be innovative solutions, like charging the world's poorest people for the privilege of putting their children into primary school, having

a system that really focuses on equity, and the rights of all citizens to a decent, quality education, and then sort of building an institutional structure that delivers that, there's an awful lot to be learned from Brazil in this.

MS. CARDOZA: Before we go to wrap-up comments, I wanted to ask you which country did better?

MR. WATKINS: Well, it was actually Chile, but, if I remember, it was from a slightly lower base than Brazil started from, in the numbers.

MS. CARDOZA: Okay. Yeah, you can't say something like that without giving us the name of the country. (Laughter)

So I'm going to ask each of the panelists a kind of classic television question, to quickly wrap up, which is: If you had a kind of magic wand, if you were in charge of, getting kids to get to secondary education, and to graduate, what would it be? One thing -- if you could change?

MR. OZIER: I'm going to jump in with health in early childhood. I've see really remarkable effects of health in early childhood.

So, I mentioned iodine supplementation, other micronutrients. These are things that we don't necessarily think about when we all have iodized salt in every grocery store that we can find. These are things we don't think about when we're not infested with parasites from the age of one. And these are things we don't think about when those same issues don't make headlines -- okay? Iodine didn't kill 10 million people last year -- or its absence -- okay? Sure, malaria kills people, HIV-AIDS kills people.

But a lot of these sort of low-grade parasitic infections do not kill people and make headlines. And so we forget about them. And yet, addressing those types of issues can have tremendous dividends at school age, and into adulthood.

So -- some of my work is on de-worming. Nobody likes talking about

worms, except for the ones in your garden. But if they're in your body, nobody likes talking about it. The thing is, these worms don't kill you. But if you just give a cheap pill, which is by now a generic drug, to all the school-age populations -- which is, about a billion people in the world are infected with these worms, and a lot of them are school-age kids -- not only does it cure the infections in the kids, making it easier for them to focus in the classroom, not only does it make them sort of run faster, because they're feeling healthier, and miss fewer days of school because they're not sick -- it has spillover benefits, okay?

So if I cure all of the infections, let's say, in this half of the room, then the people who are sitting next to that half of the room will not get infected. It's very easy to reach school-age populations because they're in school. It's very hard to reach one-year-olds, because they're not in any particular government institution. But they benefit. And that health benefit turns up 10 years later in cognitive performance.

So it's little health innovations, things that aren't necessarily making the headlines that I think provide tremendous hope.

SIR JOHN DANIEL: The problem is much bigger than we've actually realized it is today. The figure I start from is that there are 400 billion children between the ages of 12 and 17 who are not in school. That's greater than the total population of North America -- Canada and the U.S., men, women, and children. That's a lot of children.

And my argument is that these children are not going to be given any valid educational experience by business-as-usual. And that countries that have that problem should be seriously looking at different approaches -- of which opening schooling is one, but by no means the only one.

MS. CARDOZA: Kevin?

MR. WATKINS: Well, since Owen has taken the one I was going to use, I'll say what I would like to see is policy-makers around the world conducting a minor thought experiment. And that thought experiment would be, "Imagine the situation of the poorest, most disadvantaged 20 percent of children in this country, and ask yourself, 'What would I need to do -- as an education minister, as a finance minister, as a prime minister -- to get them into primary school, through primary school, and into secondary school?'"

And I think what would come out of that would be that you would be doing things very differently than you're actually doing them right now. You would be thinking about public finance in a very different way, in a much more equitable way. You would be thinking about how you trained teachers, and deploy your best teachers in a very different way. You would be thinking about making poverty-related transfers that could enhance educational prospects, including early nutrition interventions, in a very different way.

And then, since Lauren hasn't yet flashed the one-minute sign at me, I would add to that that what I would like to see, after that thought experiment has been done, that political leaders who were willing to do something ought to have somewhere to go for international support.

If you look at areas like immunization, or HIV-AIDS, we have global funds where, if governments and NGOs and the business community come up with viable national plans, they have somewhere to go to get financing to put those plans into action.

In the case of education, we currently don't have anything like that. And I think there's a real opportunity to build a viable multilateral financing vehicle. And the entry requirement, I believe, for that vehicle should be, if you come here with a credible plan to double the number of children that you were able to get into school under your current plans -- you have a viable set of policies for doing it, we'll back it. As an

international community, we'll back it. And we'll back it, because ultimately this is a huge public good, for the whole global economy. This isn't a zero-sum game -- that more education in India, or Africa, means less benefits for people in the United States or Europe. Everybody stands to benefit from this.

MS. CARDOZA: Albert?

MR. MOTIVANS: Well, it's hard to follow up after all these wonderful interventions.

I guess the investment argument is really around, making the investment early -- and trying to make a difference early. And I think, those kinds of interventions are those that are more likely to make a difference.

But I'm just coming back to this idea of that kind of lost generation, in a way, of those that are kind of on the -- beyond the primary school age, that, have really no future outlook. And so little of the, let's say, the development focus is really on that group. That that's something that really needs to be addressed alongside of, other interventions at the level of early childhood, or in the home, that need to be done.

And better measures, too. Better statistics.

MR. OZIER: If I can -- there's hope for some of these things. These aren't just things that a few panelists sitting in a room in Washington, D.C., mentioned. Some of these things are actually happening.

So, one of the things that Kevin said is, wouldn't it be great if were taking seriously the prospect of reform of these systems in such a way that it would be more equitable, and there would be country-wide plans of sort of making systems more equitable.

The World Bank right now is working with Tanzania to incentivize talented teachers to go, at the secondary level, into rural areas to make their educational systems

more progressive, and to make the opportunities more equitable for the country. And it's a push towards universal secondary education that, I think, has to be coherent in exactly the way you described. And Tanzania is trying exactly that.

MS. CARDOZA: Well, thank you so much. I've really enjoyed being here.

And I think the panelists are going to be here for a few minutes after we finish. If any of you have specific questions, feel free to come up and speak with them.

Thank you so much. (Applause)

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