

>>SPEAKER: SMART is proud to be a sponsor of ISTE 2010. It wouldn't be smart without a prize. You each got a give away from SMART on your seat. Check the attached postcard for a bright colored dot. Today's first prize is a SMART board interactive whiteboard. If you have dot number 1, you win.

Our next prize is a 4-unit set of SMART response PE interactive response systems. If you have lucky dot number 2, you win.

And our final prize is a SMART wireless slate. If you have lucky dot number 3, you win. Thanks for playing and enjoy the keynote.

>>SPEAKER: Ladies and gentlemen, please welcome, ISTE President, Dr. Helen Padgett.

>>HELEN PADGETT: Good evening. Welcome to Denver and ISTE 2010.

Denver is a magnet for explorers: past and present who have come to pan for gold, scale majestic mountains, seek elusive fish or game and now to explore another frontier: excellence in education.

What a fitting place for you to be. You are the explorers, pioneers, and visionary educators: your passion for transforming education, your desire to explore new avenues for education and teaching. You're expert's in the classroom and your unwavering focus on the educational needs of our children is making a difference. ISTE is proud to serve as a convener, connector, and resource to help you change the future for our children.

This past year has been an enlightening one for ISTE and for me, as we've been traveling the globe, exploring the excellence that is out there in education and supporting those who need a boost to bring their ideas and vision to fruition.

It's been a year in which more borders blurred and barriers crumbled. ISTE welcomed more members from more countries and expanded our collaborations and partnerships and affiliations globally.

I had the opportunity to travel to Scotland, Australia, and the Netherlands in the

past year and it was great to reconnect today with so many of you.

Despite the national boundaries, religious, political and cultural differences, we've found that educators and parents around the world share a common denominator. That common denominator is a desire to ensure the future well being of our children.

Educators and parents recognize that an education is a necessary part of that well-being.

For ISTE, the essential conditions for a good education are clearly reflected in our mission statement; advance excellence in learning and teaching through innovative and effective uses of technology.

Since we last gathered in Washington, D.C. in 2009, ISTE has progressed in several areas in pursuit of that mission.

We've expanded the reach of our benchmark NETS for technology and integration and student achievement as well as for technology and teacher preparation.

To reach educational excellence, students need to master knowledge and skills that will prepare them for an often-uncertain future.

In the NETS body of work, ISTE provides a road map of global digital age skills for learning, teaching and leadership. This year ISTE's NETS work took us to Brazil, Canada, Costa Rica, India, Malaysia, and the United Arab Emirates. We also continued and expanded our work with UNESCO on the information and communications technology competency framework for teachers.

This framework is built on the belief that student success will depend on teachers keeping up with the rapid changes in technology.

ISTE shares that belief. It is critical to ensure that new teachers entering the classroom for the first time are prepared to meet the challenges of educating tech savvy students and effectively leveraging technology to improve learning and teaching.

Nearly 20 years ago, ISTE first worked with the National Council for Accreditation of Teacher Education, or NCATE, which is the official body in the

United States for accrediting teacher programs. We developed a set of assessment performance standard for initial and advance endorsements in the areas of technology facilitation and technology leadership.

In 2009, ISTE started working with NCATE on updating these standards for release in 2011. So stay tuned.

We've become an even more high profile and high impact voice for educational technology at all levels of government. Access to highly qualified teachers to effective technology and to rich learning environments is essential for today's students.

This year ISTE announced our top 10 in 2010 education advocacy priorities.

We believe that these educational technology priorities must be part of policy maker's discussions about education in 2010.

The top 10 in 2010 were designed to jump start the dialogue and spread the word that if we are to make lasting change, educational technology is nonnegotiable.

When is advocacy most effective? When it's a grass roots effort with passionate leaders like you to motivate others to action.

In the advocacy arena, ISTE recognizes that such leadership with its public policy advocate of the year award, which I'll be presenting this evening.

We've grown our global reach and our local impact. ISTE's affiliate network now boasts 81 member organizations with the recent addition of new affiliates in the United Kingdom, India, and Australia.

Isn't that exciting?

We're working to break down artificial barriers to effective learning and teaching. As a global community of educators who recognize the potential of technology to transform education, we must continue to remind ourselves that the goals are improved student learning and the creation of a world in which all children can achieve their potential.

With these goals in mind, we need to learn from, share with, and collaborate with educators who are leading the way and demonstrating excellence in learning and

teaching where ever they are in the world.

ISTE's role is to help by taking the best ideas from where ever they may be for learning and teaching using technology and making those ideas accessible to others.

And of course, we proudly present the most dynamic, exciting, face-to-face gathering of education technology educators, leaders and pioneers anywhere:

ISTE's annual conference and exposition.

ISTE 2010's conference theme is exploring excellence.

Excellence can be defined in many ways. Over the next few days, you will see, hear, and experience examples of what excellence looks like in learning and teaching through innovative and effective uses of technology.

I'll take this opportunity to say thank you for being here. It demonstrates your commitment to your profession and to your students. And thanks to our wonderful exhibitors and sponsors, who have helped make this great event possible.

And we're pleased to welcome representatives from more than 78 countries to the conference this year.

As you just indicated how impressive that truly is. They've come as attendees or presenters, including our keynote speaker tonight, Jean-Francois Rischar.

I can't wait to tour the global gallery following the keynote, and I hope you'll join me there.

Now, this is not a world where maintaining the status quo is an effective strategy. "Good enough" is not the basis for a vision.

Going forward ISTE is setting the bar high for itself. We recognize that you have limited resources. We constantly work to ensure that the time and money you spend with us are valuable to you, your profession and your students.

Here are some of the things that we've put in place recently and some things coming soon that will enhance your experience with ISTE.

In this on demand, any time, any where world, I'm excited to announce the launch of the first phase of the dynamic resource ISTE Learning where educators can get what they want, when they want it and how they want it.

Now, isn't that a great idea?

ISTE Learning is a new online learning community and professional development market place where you can sample free concepts by cool resources and exchange creative ideas.

Look for sessions here at the conference about ISTE Learning and pick up information at ISTE Central.

We're also launching a new website at ISTE.org in September.

It will put more resources at your fingertips. The resources will be easier to find and faster to access.

There will be more ways to engage with members and other educators. We are committed to getting faster resources to you faster and in a variety of ways.

We've significantly expanded the international distribution network for ISTE published books to make them more accessible, less costly and more quickly available to our members and customers around the world.

Also in the coming months look for more ISTE titles offered in languages other than English and more titles available in popular e-readers.

Several books are already available in e-readers in new mobile formats so check those out.

ISTE is committed to the future of education. I have the distinct pleasure later tonight to present our outstanding young educator award. And to support young educators year round, ISTE has established the young educator network.

This new community provides a forum for educators in their 20's and 30's to collaborate and share resources.

From this network ISTE has selected a small cadre of emerging leaders that we will introduce to you now.

These rising stars exemplify ISTE's mission. They are already making an impact on the field and they serve as role models for educators of all ages.

As you can tell they're a great group. We have a lot to look forward to without a doubt.

Continuous improvement in the way we operate, responsiveness to our members and leadership in the greater education community requires educational volunteer leadership.

You, our members, elect ISTE's volunteer team of leaders. Join me in recognizing those who give freely of their energy, commitment and expertise as board members.

To our departing board members, Jill Brown, Gordon Dahlby, Trina Davis, Camilla Gagliolo, Ryan Imbriale and Sandra Mendoza we offer our heart felt thank you.

I must take a few moments to say a few words about Trina Davis. Term limits are ending her service with ISTE as board member, president, and this year as past president. I'll really miss her. Trina set an exceptionally high standard of leadership and innovation and tireless devotion to ISTE's mission and members during her service. Thank you for the guidance and support you've given me.

You are the epitome of a pioneering leader working to advance excellence and learning and teaching. Now, I have the opportunity to follow Trina's example and work with Holly Jobe, ISTE's new president-elect selected by the board on Friday.

I look forward to working with Holly over the next year to ensure a smooth leadership transition.

And now I'm excited to welcome our newly elected board members. Arlene Borthwick, Howie DiBlasi and Julie Evans, Gwyneth Jones, and Mike Lawrence. Welcome, board!

This great leadership team will ensure that ISTE continues to work on behalf of children everywhere.

ISTE's annual report was handed to you as you entered the theater this evening. I hope you'll spend some time reading it. The report outlines the work ISTE has accomplished and greater work still to be done with your engagement and support.

You've said that ISTE members are global reach and local impact. Those aren't hollow words.

With ISTE serving as a connector, convener, and facilitator, you form a global community of educators who have gone beyond talking about the potential of

technology to transform education and has moved to demonstrating that technology can improve student learning.

At the local level, you are the leaders and catalysts for change. Even in a world with an uncertain future. With your making it happen attitude, you are creating a world in which all children can achieve their potential. Your creativity, innovation and dedication will be called upon even more in the years ahead to advance excellence in learning and teaching.

Please join ISTE and me in creating a world in which all children have the opportunity for digital age success in school, work and global citizenship.

It's up to us. It's up to all of us.

Thank you very much.

Now, it is my pleasure to present two awards this evening: One recognizing an individual supporting the change that will shape the future and one celebrating an individual who represents excellence as an educator who is shaping the future of education.

The out standing young educator award recognizes an educator under the age of 35 who demonstrates vision, innovation, and action using technology to advance excellence in learning and teaching.

>> SPEAKER: Tonight we gather to celebrate and honor what can be achieved when one connects enthusiasm into teaching. And those we are honoring here have proven they have those traits in abundance. To all of you, we applaud your courage and commitment to bring forth new and innovative ways to enhance learning through technology.

Please join us in congratulating these winners.

Our first award goes to the out standing young educator Julie LaChance. This new award recognizes and honors those under the age of 35 years old who demonstrate vision, innovation, action and transformation.

Julie was nominated by her school principle. In less than 3 years, she

transformed a 44-year-old high school with little modern equipment into a technology-laden environment where every classroom has a SMART board projector and sound system. The new school boasts an ART I lab, pod casting centers and other tools. Platforms like second life and devices like the iPod touch are used daily.

Julie was recognized for her ability to train and inspire teachers and staff. Congratulations, Julie.

The public policy advocate of the year award recognizes an individual who is an outstanding leader and mentor in advocating for education technology policy at the local, state, regional, national or international level. John Cradler is the winner of this year's award.

>> SPEAKER: 2010 marks the second year the award has been presented. For the past 25 years, John's efforts have served to enhance education throughout the country. As co-chair of the computer using education legislators committee and co-director John is a constant advocate for Ed tech policy development. He has campaigned on behalf of numerous legislation and a state Ed tech plan.

Congratulations, John.

ISTE also recognizes Heather Blanton. A Title 1 math teacher with J.W. Adams Combined School.

She's worked closely with VSTE in Virginia and is credited with generating membership. Congratulations Heather and congratulations to all of ISTE award winners and award judges.

>>HELEN PADGETT: Each year, ISTE has the pleasure of working with dedicated individuals and organizations from the conference region, who ensure that local and regional needs and topics of interest are highlighted.

At this time, I will recognize and acknowledging some very special people who have made substantial contributions to this year's conference.

First, our thanks to the ISTE affiliate organizations in New Mexico, Utah, Nebraska, Wyoming, and Arizona. Who worked hard to promote attendance to their members and get them here this week. Thank you for recognizing the unique opportunity ISTE 2010 represents to the western region of the United States and encouraging your educators to attend.

Next, as a special partner, our thanks go to the board and volunteer steering committee at Colorado TIE.

With their help we built a tremendous program for all of you. We co-developed the new leadership boot camp held on Saturday and created registration incentives to bring more than 2,100 Colorado educators to ISTE 2010 who otherwise might not have been able to attend. Thank you.

In addition to providing organizational support, regional educators participate in many facets of the volunteer conference committee.

Please join me in acknowledging and thanking Regional Program Chair Karen Ortiz from Colorado and Regional Workshop Chair Kara Gann from Wyoming.

A complete listing of volunteers appears in your final program book let.

Finally a big thanks to Helen Soule and Danny Arkin for their efforts in getting the word out regionally about this exciting event and recruiting the volunteer power necessary to keep the wheels turning.

One of the highlights of every ISTE conference is the outstanding line up of keynote speakers. ISTE 2010's keynote platform spans three sessions during the conference. This year, in addition to great speakers at each keynote, we'll be recognizing excellence that ties in with the focus of each one.

Tonight we got off to a great start by announcing the outstanding young educator and the advocate of the year, who are certainly two examples of seeking and supporting excellence in education.

Shortly, I'll introduce tonight's keynote speaker who will share his global perspective on why seeking excellence in education is one of the keys to solving the world's most pressing issues.

On Tuesday, a distinguished panel of educators and education leaders will discuss how we might get to that excellence. We will also present the outstanding teacher of the year award, SIG media specialist award, and SIG online learning awards.

Then on Wednesday, our exploration journey concludes with the spotlight on Dr. Jeff Piontek, who will address excellence in the context of effective school leadership. We will also present the Outstanding Leader of the Year Award for District Innovation and Technology and the Kay Bitter Award for Excellence in Technology based pre K-12 education.

Now, it is my pleasure to introduce tonight's keynote speaker.

Since retiring as Vice President of the World's Bank in 2005, following a 30 year career, Jean-Francois Rischarde has been addressing policy makers and speaking around the world on the compelling need for new, out of the box approaches to global problem solving.

He is also working with a half dozen organizations comprising about 10,000 schools across the world to inspire curriculum changes and interschool student links designed to expose students more systematically to urgent global issues and help them develop a more global, citizen first mindset.

Much of his work is based on his book, *High Noon: Twenty Global Problems, 20 Years to Solve Them*, which has been published in 15 languages.

He strongly believes that nothing less than a combination of new methods of global problem solve and go new mindsets will get the world out of its paralysis in the face of the dangerous pile up of unresolved global problems.

Please give a warm welcome to Jean-Francois Rischarde.

>>JEAN-FRANCOIS RISCHARD: Thanks Helen. Well, I'm glad to be here and I'm glad to talk about this world with an uncertain future she just mentioned.

It's going to be called "Navigating in Turbulent Times." I've often wondered about the grammar in this title.

It's going to be about the world's urgent need for some approach to global problem solving, but I will add an important component to it which is the crucial role of educators and education in getting us to that better problem solving system.

The messages will be about 7. The first one is we have entered an age that I call fast forward globalization. That is marked by extreme complexity and change. The second point is that there are two distinct forces that are behind these enormous increases in complexity and change.

And those two forces are somewhat running ahead of our ability to manage things. The third point is that in that context there are some 20 urgent global problems that are not being solved deep and fast enough and that are very burning problems and we are running sort of out of time in solving them.

The fourth point is that we have an international system but for some reason that system which is not a bad system hasn't been good at solving this new generation of problems because it is parceled by something fundamental.

The fifth point is the one that keeps me an optimist. It is that there are ideas around of how we can improve our global solving method and performance.

The sixth point is that it is urgent that the world's leaders discuss this whole topic of the method of global problem solving, why it isn't work and go that we introduce at least some attempts to try new ideas on that account.

And the last point is the one that not only do we need a new global problem solving methodology, we also need new generations of students with a new mindset, different knowledge and skills than earlier generations and that's where you have a system critical roll to play in this complex world of ours.

So let's start with an absolutely arrogant and caricature type slide where I take a thousand years of change, Middle Ages, 1200 to 1800, Industrial Revolution I have 1800 to 1960 and anything from there on is fast forward globalization.

Medieval Times, Industrial Revolution, Fast Forward Revolution.

You can see that information was spoken in Medieval Times, printed in Industrial Revolution, now it's digital. The notion of time was hours, then seconds and now it's

nano seconds.

There used to be plant and seed and windmills and then fossil fuels and now in fast forward globalization our survival will depend on solar energy, nuclear fusion and so forth.

The metal of the time in Medieval Times was iron, then it was steel and now today it's composite materials.

The new 787-Boeing is 55 percent made of composite materials.

One of the main reasons for these changes was the step up. In the Medieval Times it was 10 people, 10 to the power of 1.

In the Industrial Revolution we went from 1 horse to a 1,000-horse power locomotive. The step up is 10 to the power of 3.

And this age is 10 to the power of 4 and the computing power step up is 10 to the power of 5, even more extraordinary.

That is what's driving this enormous pick up in the change and complexity, change being linear in the Medieval Times, slow exponential during the Industrial Revolution, now it's highly exponential and it's very, very high.

As a matter of fact, change is so fast these days that many curves as we'll see in a second are going straight up.

Look for instance at population. Population was a few hundred million individuals during the Medieval Times, 1 billion people in 1800, 3 billion people in 1960 and then look at the recent period. From the 3 billion people in 1960, we went to 6 billion in 2000. Today we are about 6.7 billion and we are going straight towards 9 billion in 2050.

So we will have tripled the world's population in a world that is already very stretched from an environmental standpoint.

So I'm not going to belabor all this but you have a period of time, which is marked by hyper-change which as a said with many curves going straight up.

For instance, here is a curve I found for you on copper use. This is the copper we're using. See how the curve goes slowly up, picks up during the Industrial

Revolution and see how in the last few years before the year 2000 the curve goes straight up.

And we haven't even added the last two years where it went even further straight up than that if it's at all possible.

During the financial crisis there was something called credit default swaps. There were a few hundred million dollars worth in 2000. In 2007, 67 trillion worth.

If you saw the temperature curves, it looks exactly similar to this. Anyhow, this is the shape of things to come. Not just hyper change but curves going straight up.

And hyper complexity is the other component of the complexity surrounding the oil that's the problem in the Gulf of Mexico.

Think of the complexity of disentangling the Lehman Brothers problem. It took an investigator 38 million dollars worth of reading to figure out the complexity.

Think of the big deficits coming up because of the pension costs and the aging and the very difficulty of getting out of the situation.

Any how, this is the period we're going through and the two big forces that are making the period so complex is a population increase and a new economy.

The population increase we just saw, from 3 billion to 9 billion in a very quick time, in 90 years time. The only good news is that by 2075 after we may reach maybe 10 billion people the world population will start declining. That's an important point because it means we have to hold the fort until then.

The new economy is based on two revolutions. An economic revolution and a technological revolution.

The economic revolution was going very quickly from roughly 3 billion people in market economies 40 years ago to today where all countries are in market economies. The only outliers are North Korea and Cuba and even they are starting to flirt with the World Bank.

The technology is based on these new communications and computer technologies and it's an Industrial Revolution that is quite different from the previous ones. They had to do with transforming energy and raw materials. This

Industrial Revolution has to do with transforming time and distance.

So it goes much deeper into the fabric of society and how economies run. It's also an Industrial Revolution that makes knowledge the biggest factor of production, more important than raw materials, laborers, capital or even exchange rates.

And this new economy is producing wonderful new products, new ways of doing things, just look at what we're doing here and all the new technologies you have in your classroom.

But it's also producing stresses. Greater disparities. So the mindless growth, growth reaching 12, 11, percent in China with huge environmental problems.

So the force that we have here is both positive and negative whereas the population increase force is all-negative.

The problem with these two forces is they are highly exponential. And because they are exponential they are overwhelming human institutions. They are the 200 nation states, the government's, the ministries, the public agencies, the international organizations such as the World Bank, the IMF, many UN outfits, about 40 of them. And as these institutions are overwhelmed we have a management gap.

And this is not just because institutions are falling behind these huge exponential forces but it's also because mindsets which are even slower moving than institutions are falling behind.

The red and blue line follow dog years. Up there on the red line and the blue line is dog years because on the blue line every year that we wait not solving global warming is like losing 7 years. Indeed if we manage to stabilize carbon dioxide in this century, the temperature of the sea would still go up for a thousand years.

On the red line, Amazon was worth \$13 billion, after 3 years of existence as if it had been around for 21 years.

On the black line is another concept, not dog years but bureaucratic years.

It's something that you should be able to change in one year, takes actually 7 years to change.

So you have this management gap in which brews a lot of bad stuff, bad mood and

verbal violence in politics for instance. But the biggest problem is non-resolution of many urgent global problems that many of them make or break for the planet.

Global problems cannot be solved nation by nation. Big one is dangerous climate change, which is absolutely not being solved.

The Kyoto Protocol was a mouse of a treaty compared to what we should be doing to stabilize carbon dioxide in this century. To actually stabilize carbon dioxide takes a hundred year effort and we have not done more than and or 2 percent of what we need to do.

Forests are declining in the tropical areas, in the rich areas of the world they are stable, even growing a bit but the tropical area, forests are coming down almost 0.75 percent of a year so we've lost about a fifth of them.

Not solved.

Bio-diversity loss is a huge problem. At this point, 1 mammal out of 4 and apparently 1 plant out of 5. There are 41 treaties in that area but there's been no progress on that front.

We've lost 40 percent of the wildlife that existed on earth in the last 40 years.

Fisheries are threatened by depletion. In the U.N. study, it says if we don't get our act together by 2040 or 2045, the entire system may collapse.

Water is a huge issue. One that would cause a lot of tension if it isn't resolved. Many big rivers are no longer reaching the sea in summer, for instance, the Colorado River, the Yellow River, the Nile. There are huge problems with water tables going down and not coming back up again, for instance, in China and many other spots in the world.

Many rivers have to be shared. The Nile is shared by 275 million and the Nile is already over burdened. India has a huge water problem coming.

Poverty is not solved either. Half the planet lives with less than 2 and a half dollars a day. 3 billion of them is less than 1 dollar and a quarter a day.

And the rich countries which really should put the full horse power on before the 3 billion people that are coming now in the developing world, these rich countries

have reduced their aid budget.

Global financial stability, we had known for years that this was going to be a problem. Actually, since '98. Only now is the world getting its act together and you can see in the G20 meeting this weekend a lot of dissension on how to go about this.

And finally an example, bio-technology research. You've seen these wonderful new things, putting artificial DNA into a cell and it functions, there are many people trying to start a virus from scratch. It would be much better—these are wonderful things but it would be much better if there were international rules on isolating the experimenting and testing and preventing the big down side from this research to become manifest.

So when you look at these sorts of issues, they are not being solved. You have to scratch hard to find one being solved.

The one more or less solved is the ozone layer problem through the Montreal Protocol. There were only 6 countries producing these chemicals and there were alternative technologies and it was solved.

Another one solved was Smallpox. But apart from those two which are the exceptions that prove the rule, these big issues are not being solved at this time even though they are very threatening for many.

This is only a partial list. The bigger list is some 20 issues. 7 or 8 of them are in green. They are about sharing our planet. Many of those are make or break.

In red, you have the next third which is about sharing our humanity which means social and economic issues of great importance that need a coalition of great nation states to solve.

Poverty is one, peace keeping and terrorism fighting is another one.

Education is one also. It's the biggest lever for solving all the other problems.

The global diseases which as a U.N. study shows happen when you have a lot of population concentration next to wild life. You have 200 something instances of animal diseases crossing to humans and when we go from 6 to 9 billion this will be a major issue.

The natural disasters are 15 times the rate of the 1950's.

And finally there are certain areas where we have to share common rules throughout the world. I just gave the example of bio-technology research and there are many others.

When you study these issues, which I did in my little book, *High Noon*, you find four things about them. They all have technically feasible and politically feasible solutions.

Secondly, it's amazing how little it would cost to solve all these issues. It's probably something like 3 to 5 percent of world GDP. Which is a fraction of what we spend to stabilize the financial crisis, which was something on the order of 15 billion, trillion dollars.

We have less than 20 years to act. Why? This is because many of these issues out of the 20 are coming at us in the form of crisis very, very quickly. We are in a global credit crisis right now. It started in 2007. It's not exactly finished. It has morphed into sovereign debt crisis.

Starting now there is an aging time bomb, particularly in Europe but also in the U.S., particularly in Japan and soon in China.

2015 or so, we'll start feeling the pinch from conventional oil resources becoming much more difficult to find in relation to demand.

By 2030 the demand for liquid fuels will be 100 billion barrels a day. There will be a seven 60 million barrels a day deficit. 70 million.

The ecological footprint, the 8 big ecosystems of the world will also start having problems around 2025 unless we do something about this in the next years. And climate change. These are not accurate dates but we have this chain phenomenon of these crises coming one behind the other and some of them interfering with each other like the first two.

To illustrate the ecological footprint over shoot and to illustrate why we don't have much time, look at this some what sobering slide.

2005, 6 billion people, 40 trillion GDP, 1.25 planets.

That we can't do for many, many years. We can't do a few years but we have to go back to one planet living because if we do this, we actually start living not off the interest but we eat into the capital. The erosion of the ecosystems become irreversible.

If you look at what will happen on current trends, if we don't do anything, by 2050, 9 billion people, 140 trillion GDP, look what I find? 2-something planets. That doesn't compute.

The point is this is very close by. This is a few decades away and we need to do major things to avert that collision with the planet's carrying capacity and quickly go back to one planet living.

So we cannot wait 30, 40, 50 years, we have to go very quickly on these things.

The first point you find is none of these issues are being solved.

The question is then if they all have solutions, if it's not expensive to solve them, if we have little time left to act why aren't we solving them.

The first suspect is the international system. That one is composed of four pieces. Treaties and conventions is the normal way nation states get together to solve global issues. That's a very slow, ritualistic world and not a very effective world.

To give you an example, in the environmental area 250 treaties have been put in motion since 1960 and despite that there hasn't been any progress on any environmental front.

This is because treaties are often miniscule like the Kyoto Treaty, which I described as a mouse of a treaty, or it's a mouse that doesn't have all the key people in it. Many countries are missing or you have a treaty that looks good but it doesn't have the Secretariat or at least two people and a dog. Or the treaty is not enforceable.

So there is a treaty that requires France to lower its night rate emissions by half. What did France do? It doubled them. Nothing happened.

The U.N. summits are good at raising awareness two weeks before and two weeks after the event but not good at solving the issues because it's too much like a

zoo.

So it's the G8 and G20 which are useful groupings of countries but they are quite reactive and superficial.

To give you an example, the discussion on the G8 meetings on the global economy lasts 90 minutes. The whole meeting lasts only 72 hours at best and they cost a lot for the photo opportunity.

In the case of Canada they have a G8 and a G20 for \$1 billion coming up.

At any rate, the things that are being discussed there have already been negotiated between the so-called SHERPA, which are the assistants of the heads of state, and there's no real brain storming of these issues.

And the fourth part is the World Bank, the IMF, and some 40 U.N. agencies and programs which are all doing reasonably good work in their corner but they are not able to say independently "I'm the World Bank, I will now solve the fisheries issue."

The reason is the owners of the World Bank won't let them have that sort of independence.

So the system isn't bad but it doesn't come together as a serious rapid global problem solving system.

So one is tempted to say let's just fix this international system and then everything will be fine.

Unfortunately, that's not the case because there is a bigger reason behind all this, why these issues are not being solved. And it's the following one. It is that our planet has been cut up into 200 nation states. The nation state concept is not very old. It dates back to 1648 or so. It still is brand new in a way.

It's a fantastic way to manage countries inside domestically but of course, nation states by design have a territorial perspective. They look out for the people in their territory.

Their politicians go to elections every 4 years and so the horizon is very short and the perspective is territorial.

Issues like global warming, like the Mexican Flu, the Avian Flu, all these issues are

cross border issues. You remember it takes a hundred years to stabilize carbon dioxide through a systematic plan of actions.

So there is a deadly clash between the features of the nation states and the features of the global issues that are so important for us to solve and that deadly clash is the biggest challenge of our lifetime, it's getting that clash out of the way.

And if you think about it, how could we get that out of the way because this is what's paralyzing the international system.

There are 3 ways of doing this. One way which many politicians advocate is to redesign the U.N., the World Bank, the international system I described. But that would do nothing about the clash. That's not the real problem.

It would take a long time to get done. For instance, the Security Council in the U.N. is supposed to be reformed. They have studied the reform for 19 years now but nothing is changed. Remember, bureaucratic years.

And it would produce only trivial changes. The IMF moved for 17 years to move voting rights from northern countries to southern countries. After 7 years they moved 2.7 percent votes.

A much more powerful solution would be to have a world government sitting on top of the 200 nation states and forcing them to be serious about global problems and go to conform themselves to treaties and international norms.

That would indeed take the clash head on but it would take forever to set up. The Europeans have set up a regional government, it's taken them 60 years, they are not finished yet. How much time would it take to set up a global government with 200 members?

It's probably not that hot an idea in the first place if you think about it so we're going to eliminate that one too.

Which leaves us with innovative ideas of some kind and one can immediately figure out what these ideas should look like. They should do something about the clash.

It should be something we should be able to put up fast because we don't have

more than 10, 20 years to act. And it should be something that somehow injects new forces that push the nation states and particularly their politicians towards being more planet minding and more long term minded.

When I wrote my book I thought I would find many ideas about that and I went all over the world giving speeches and I found very few, actually none of them. I found which one, which is the one I describe in the book and I'm only, have convinced about it on some days.

I'm going to describe it to you. It's important that we come up with something new because otherwise we're stuck with the particlized system that will threaten mankind.

Here is what the global issues network would look like. It would have 3 faces for each of the 20 areas on my list.

Let's take fisheries depletion. It would be set up by one of the global multi laterals, merely as facilitator. So it could be the World Bank or not. They would essentially in the first year, I'm making all this up just to visualize it. They would gather 30 experts that are absolutely top experts at fisheries depletion and management, 10 from governments, 10 from international NGO's, like Action Aid, Green Peace and 10 from business. Because business may be the problem but they have experts in these companies that know how they do it so they could also know how to avoid it.

So the idea is to take these experts where they are and not based on representational concerns. To take the example of the 10 government experts. I'm from Luxembourg but I wouldn't want an expert from there. There may or may not be a U.S. expert. It doesn't depend on the importance of the U.S. This is not a representation logic, it's an expert logic.

These 30 experts would co-opt another 60 experts, let's say 90, still a third, government, NGO a third, business and they would go into solution in a castle in Spain or an island in the Caribbean and essentially told to represent all of us and do the best job they can at figuring out what the problem is of fisheries, what is the

problem of cod, of tuna, of high sea fishing, of permits, et cetera, how much time do we have before this stuff collapses, what would a solution look like if we could find one.

But particularly what detailed solution would the world adopt if the world was under a single government. We know that's not the case but we want them to visualize what the single government would do.

And then based on these details, this single management solutions, they would come up with detailed norm packages that correspond to these solutions.

So these norms would not be fluffy norms like the U.N. often produces but very detailed stuff. For instance, alternating fishing bans. You ban fishing for 3 years, 90 percent of the fish come back, you move the ban to somewhere else. GPS monitoring of the boat.

Tradable fishing rights. Prohibition of fishing techniques by certain countries.

I don't have time to describe the atmosphere and method which this would happen but it would be a Nobel prize anticipating atmosphere where these experts would forget where they came from, the government of Iceland for instance and represent all of humanity and speak out on behalf of humanity and figure out how the problem can be resolved once and for all.

Having issued these norms, the network would reopen, the experts could go home, and on the basis of these norms the network would enlist many more members and become a rating agency. And what it would do is every year each network would write all 200 nation states against the fisheries norms against the global warming norms, against the norms on natural disaster management, et cetera and on top of each league table would be the gold med a.m.s, the countries going out of their way to help solve the problems. For instance Iceland in fishing area.

Then the silver medals and then the bronze medals and then the brown medals for countries that are messing up the countries that are messing up more. And then the black metals for the criminals. Japan, Taiwan, Spain in the fisheries.

Which would be a criminal state in global warming? The U.S.

So you get the idea, these 20 league tables would come out once a year and they would be sort of the Olympics of global issues.

They would essentially represent a picture of where the big issues are and where the various countries amongst themselves but also the year before.

And if this is done in a very solemn way it would do several things. To the left you have the 200 nation states, with people at the bottom and the governments on top.

Their logic is one of vertical election based legitimacy but we should put that system and the politicians under pressure coming from the global issues networks which are not based on electoral but they are not territorial, they are cross bordered and they spend 2 or 3 years of their life in the Spanish castle investing into that solution in great depth.

So that system would be used to do two things. From above there are these league tables coming out every year, they would be reputation effects, naming and shaming effects.

You could lead to sanctions, virtuous countries could decide to sanction other countries.

Consumers may decide to boycott countries that are in the criminal box

Pension funds could do the same thing.

The idea is to put some pressure on the politicians in the absence of the world government.

From the bottom, these tables would equip the voters, particularly the young voters that are in your classrooms now with a simple tool that would enable to change the political discourse during the election.

During the elections they could ask why is our country 5 times out of the 20 in the criminal box. How come our ratings went down compared to last year? Why aren't we up there with gold and silver metals. Aren't we ashamed and so forth.

So this would be voter information and mobilization effects.

So that's an idea of an alternative method. As I said, some days I think this would

work, some days I'm not so hopeful but at least it's some change compared to the existing international system situation which is paralyzed.

So I think we need urgently heads of state to sit down and discuss why the system isn't working and to play with ideas like this. We need such a conference quickly. If we don't have a conference like this quickly, we're going to be in bad shape on this planet.

That's what I scratched together in my little book *High Noon*. And that it turned out that the schools grabbed the book and it became sort of a tool in many, many schools, and I discovered in all this—and I hadn't forecasted this, that we actually need two things. We need some faster and deeper problem solving methodology while there's still time, but we also need new generations that come out of schools with far more knowledge, much better skills and a very different global mind set than earlier generations if we are to give some wings to any new method that we can come up with.

This has to come from the heads of state, this has to come from you. From the education systems, from educators.

And clearly the two have to be there at the same time.

The second element, system critical is going to be slower to come by but it's very important that it be there.

Essentially this means mobilizing education systems to take 5 to 18 year olds and essentially give them first of all far more knowledge about these 20 or so global issues, why the world is changing, how it is changing not just what the issues are but also give them a clear sense of the solutions because as I said earlier the solutions are there.

We want to give them a mindset in which they don't consider it someone else's problem but they understand it's each of our problems and they have to have a mindset where they are global citizens first, national citizens second and local citizens third. We have it the other way around.

Third, the schools have to provide a perspective on multicultural thinking. If you

want to teach global warming, it shouldn't just be the science teacher but also the economics teacher and also the history teacher because of U.N. relation issues and you have to know how it feels to be Chinese and how to be in India and Africa and not just the U.S.

And finally you need all these skills you talk about. Creativity, problem solving, so forth, all these new skills mentioned by Helen.

And this can be done through curriculum changes but also through ☐☐ this is a horrible word ☐☐ PERICURRICULAR initiatives.

These new skills and a broader perspective.

These new skills are to make students into more communicative effective problem solvers and morphs and shakers.

It also has to do with helping the students develop their skills in proposed solutions, making teamwork second nature and so forth.

What's interesting about these sort of curriculum changes, we'll talk about Tuesday, is they also fit with other reasons to change the curriculum which come from these new skills concerns.

Actually, you, yourself in ISTE, there are new standards for students, all of them are listed there, they are probably more familiar to you than to me. And essentially what's interesting about all these 6 items is there a fantastic fit with global issues.

In other words global issues are such a gripping topic, the next generation is so concerned about them because they will inherit these issues from us unsolved. It's so gripping that using global issues throughout the whole K to 12 occur I can aluminum as a prop will make for much deeper learning otherwise.

Global issues as case material would make learning of these skills and teaching of these skills much more interesting, and deep. And students equipped with these new skills would raise the odds of solving these global issues in conjunction with methodology changes I just scribed.

With a partner who is called Clayton Lewis who is head of the international schools, I've been trying to influence the university level. The APEX organizations.

Various other levels of curriculum authorities but we have also encountered many schools that have gone ahead and introduced global issues to all the classes.

One of the discoveries in doing this is for reasons I don't completely understand, institutions tend to be much more change resistant when they should be the opposite.

If someone could clear me up on this, I'd be very interested ☐☐

And the second point besides the curriculum changes is the PERICURRICULAR examples. Here is an example.

They started taking 13 to 18 year olds into a global information network experiment. Schools teamed up and picked 4 issues out of the 20 and they produced some remarkable results.

What they found was the pedagogical results were very impressive. They added a town meeting electronically and they added global issues network conferences.

Essentially these are student-led conferences, which also have been very motivating to students and very successful.

Here is a picture of the first one we did in Luxembourg.

Last March there were 3 in one month. Essentially there is now a website where you can get help in organizing these conferences and other activity.

Another initiative example is one by NAIS, which has charted something called Challenge 20/20. They pick one issue, they work at it, they produce a report and here again the results have been very impressive.

You can Google the map, you can see the issues they use is the same methodology as mine.

And you have time to sign up by August 16th it looks like.

Another example is an interesting initiative of creating a Reuters-like news agency that's run by students all over the world with bureaus in various cities. It's a very smart way to get all the students slightly involved.

Finally you'll hear about this Tuesday, taking it global which is one of the biggest platforms for students involving global issues has kicked in and it's working on the

High Noon Project that will have forest action as a topic.

So these are all the organizations that have been involved in these efforts, possibly more than 10,000 schools. I wish I had as much success with governments but on the education part the education system has delivered.

And you remember these were the two points, we need a better method that has to come from the heads of states. I concentrate on that in the next few years and do my best.

You concentrate on the next ones as educators. Of course, these wonderful smart technologies, ICT technologies that are behind all of this.

So in a few years we'll look back and we will have achieved something because if we don't move things, the current system is going to run us into a brick wall.

Thank you very much.

APPLAUSE