wise

world innovation summit for education

مؤتمر القمة العالمي للابتكار في التعليم

DOHA QATAR

DEC 7-9 10

FINAL REPORT

Building the Future of Education

an initiative of   Qatar Foundation

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Foreword

H.E. Sheikh Abdulla bin Ali Al-Thani, PhD
Chairman of WISE
Qatar Foundation

The second World Innovation Summit for Education (WISE) took place in Doha, Qatar, from 7 to 9 December 2010, further advancing the vision of Her Highness Sheikha Moza bint Nasser. It is my pleasure to introduce this Final Report which provides an overview of the event, with summaries of speeches and debates, photographs and highlights on special features.

Throughout the Summit, I was impressed by the insights of our many speakers and excited by the potential for inspiration and change that emerges when people from various parts of the world, and with different experiences of education, debate and learn from each other. From the first morning at WISE 2010, a spirit of open dialogue quickly spread through the various Summit sessions. WISE has shown itself to be both an annual platform and a year-round initiative for our expanding community, which stimulates new partnerships, and fosters innovative ideas and concrete action in education which will have a lasting impact on human lives.

In addition to a full programme of Plenary and Breakout Sessions, WISE 2010 introduced several new and lively features that made the Summit more interactive.

For example, in the Spotlight Sessions, individuals shared their personal stories and experiences in smaller gatherings. Here, the 2010 WISE Awards winners engaged attendees in their visionary educational projects. The sessions also provided a stage for the "Learners' Voice" – a group of 20 students from around the world -

to offer their original and stimulating perspectives. Along with so many attendees who interacted with them, I found the participation of these young people brought a vital new dimension to the Summit. We will increase the presence of Learners at WISE 2011.

Workshops constituted another new opportunity for dynamic change in 2010, bringing together key decision makers to address specific issues such as "Rebuilding the Education System in Haiti" or the Programme for International Student Assessment (PISA) results. A special session focussed on the progress made toward the education-related United Nations Millennium Development Goals (MDGs), including the achievement of universal primary education. In all these sessions, there were spirited exchanges of views. The Haiti Workshop launched a task force to study and address the country's acute educational problems.

In the Closing Plenary Session, I was proud to announce, on behalf of Her Highness Sheikha Moza bint Nasser, the establishment of the world's first major international prize for education - the annual WISE Prize for Education – which will recognise and reward an individual or a team for an outstanding, world-class contribution to education. The Laureate will receive $500,000 (US) and a gold medal. This new award supports our mission to place education at the forefront of the world's political and social agenda, drawing attention to the urgent need for investment.

I would like to express my warm appreciation to our six distinguished institutional partners for their enthusiastic support: Agence universitaire de la Francophonie (AUF); the Association of Commonwealth Universities (ACU); Institute of International Education (IIE); International Association of University Presidents (IAUP); RAND Corporation; and the United Nations Educational, Scientific and Cultural Organization (UNESCO). I would also like to thank our sponsors, Qatar Petroleum, ExxonMobil and Microsoft, and our media partners, Euronews and Al Jazeera. Above all, I wish to thank our speakers, moderators and attendees. Without their commitment, insight and passion, WISE would not be possible. They are making WISE a unique focus for collaboration and a real force for good in the world.

Abdulla bin Ali Al-Thani, PhD
Chairman of WISE
Qatar Foundation

103 world-class speakers

1,250 high-profile international attendees from 103 countries

152 journalists from over 50 countries

46 Sessions over three days

WISE 2010 Summit

WISE 2010 Summit: Key Figures

The second World Innovation Summit for Education (WISE) took place in Doha, Qatar, from **7 to 9 December 2010**. It brought together a great variety of influential thought leaders, decision makers and education stakeholders from across the globe and many different sectors and disciplines, all with a shared commitment to collaboration, exploring innovative ideas and building the future of education.

Attendees by field

- Media 14%
- Academics 35%
- Politics / Institutional 18%
- Private Sector 15%
- NGOs / Associations 18%

Attendees by geographical region
(not including Qatar)

- Africa 7%
- Europe 31%
- Asia and Oceania 19%
- Latin America 8%
- Arab World Countries 15%
- North America 20%
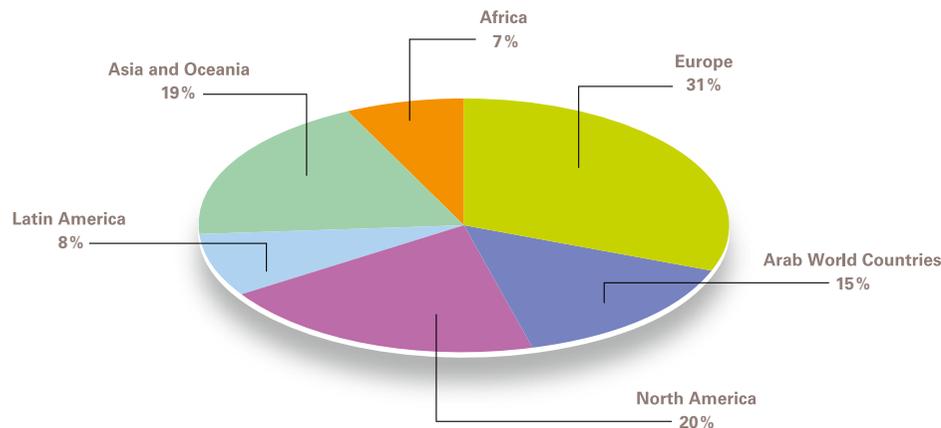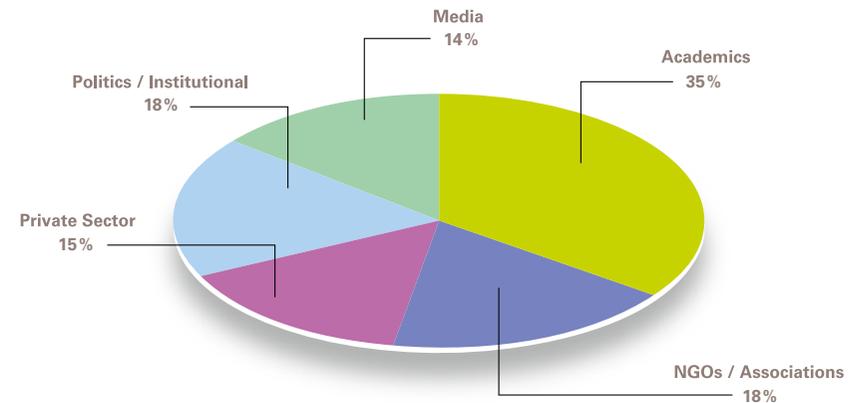
Day 1

Opening Plenary Session

Building the Future of Education

Keynote speech
H.**E. Lakhdar Brahimi**, former Under-Secretary General, United Nations

Video message
Nancy Pelosi, Speaker of the United States House of Representatives

Introduction to WISE 2010
H.E. **Sheikh Abdulla bin Ali Al-Thani**, PhD, Chairman of WISE, Qatar Foundation

Master of Ceremony
Ms **Nima Abu-Wardeh**, journalist and broadcaster, presenter of BBC World's Middle East Business Report

H.E. Lakhdar Brahimi

Keynote Speech

I have been dealing mainly with peace and security issues for the past 20 or more years. However, education is always a key part of any peace process. Indeed, it is so important that former UN Secretary-General Kofi Annan referred to it as peace-building by another name. Some say that conflict has at its root acute poverty and ignorance. Maybe not all conflicts have these causes, but poverty and ignorance create favourable conditions for it. That is why the eradication of poverty and hunger and the provision of universal primary education for all children worldwide are the first two of the Millennium Development Goals.

The Human Development Report by the United Nations Development Programme (UNDP) confirms that the Arab region is very seriously disadvantaged in every area of education. I will mention two manifestations of this. Gaza is a huge open-air prison: everyone says that this is unacceptable and unlawful, but very little is done to put an end to the situation. However, it is largely thanks to the United Nations Relief and Works Agency (UNRWA) that Palestinian children are among the best educated in the Arab world. It has to use metal containers as school buildings because Israel will not allow cement or other building materials in, even to the UN, and because UNRWA is short of cash. There are 40,000 other children in Palestine who are not able to attend school because UNRWA does not have the facilities.

Secondly, statistics tell us that universal primary education will be achieved in most Arab countries by 2015. However, literacy alone is not education. What is learned at home and in the street is part of education and culture. One of the most important values is tolerance, the willingness to accept difference, and here we must admit that, not only are we well below acceptable standards, but we have regressed. Thirty years ago, an attack of the kind that took place in Iraq recently, targeting worshippers in a Christian church, would have been unthinkable. The catastrophic invasion of Iraq in 2003 has much to do with the regression, and it is in the interest of everyone to find answers to basic questions: why it was invaded, what price the people of Iraq paid for it, what price we will all pay for it, and who will be made accountable.

> Some say that conflict has at its root acute poverty and ignorance. Maybe not all conflicts have these causes, but poverty and ignorance create favourable conditions for it.

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Arab societies are also responsible for this state of affairs, but do we need to accept this as unalterable? India, South Korea, Singapore and China have changed drastically over the past few decades. They are not only producing material wealth, but also knowledge, which is the ultimate indicator of development. These achievements were made by third-world countries that started at a much lower level, and they were made possible by education and good governance. Qatar aimed high and succeeded, and there is no reason why we cannot do the same.

US Representative Nancy Pelosi
Video Message

All things are made possible by the pursuit and embrace of knowledge. The challenge of the 21st century is to ensure that technologies advance our most cherished values. Innovation begins in the classroom, and the US has invested billions of dollars to adopt reforms and ensure better outcomes. We know that when we empower our youth, a brighter future is possible.

H.E. Sheikh Abdulla bin Ali Al-Thani, PhD
Chairman, WISE
Themes for WISE 2010

The profound changes we are seeing present a series of pressing challenges to education. The needs of this new era have led to the launch of the multi-sector initiative of WISE. However, Qatar Foundation has been pursuing its charitable objectives in the Arab world and internationally for 15 years. We have always believed in drawing from experience, so it is natural to gather expertise from around the world and focus it on

building the future of education. Our aspiration is to bring together multiple stakeholders and to connect theory and practice, because this collaboration is critical in facing complex issues.

WISE's action-oriented approach involves producing solutions that can be adopted and adapted. A yearly Summit will not suffice for these objectives; it was always our intention for WISE to become a year-round platform for innovation initiatives. I am pleased to say that, even in our first year, we have already taken steps that have made a difference. Success is based on partnerships, and this is a unique strength of WISE. Our five original partners have now been joined by UNESCO. The media also play an important role in drawing people into the debate and making our case in the constant competition for resources. The Summit is organised around the themes of Improving Education Systems and Exploring Innovative Trends. Every human being has a right to education. The obligation of society is to provide that and ensure it meets our needs. Millions of teachers around the world are doing a great job, despite often being poorly paid. We must raise their status in society, because they are the architects of our shared future.

The second theme looks at the potential of emerging technologies and branches of science to provide radical solutions and offer new possibilities. Therefore, among the Breakout Sessions are Appraising the Impact of ICT, Lessons from Cognitive Science and Games for Serious Learning. We have devoted a special Plenary Session to Funding Education. We have also introduced other new features at WISE this year.

We are honoured to have brought together over 1,200 leading thinkers and innovators from around the world. Your combined experience and talent will spark innovative solutions in education. WISE is your platform, so please use it.

Our aspiration is to bring together multiple stakeholders and to connect theory and practice, because this collaboration is critical in facing complex issues.

Shared Values

" *Young people are going to be the key factors in this. We had some examples during the session where, if you engage and empower young people, they have great creativity and imagination – and this can happen in the classroom. So make space for the young generation, for the youth, for the students themselves.* "

Prof. Yvon Fontaine, Moderator

Speakers
H.E. **Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani**, Chairperson, Qatar Museums Authority Board of Trustees, and Chairperson, Reach Out to Asia (ROTA) (Qatar)

H.E. Dr **Mohamed El-Aziz Ben Achour**, Director General, Arab League Educational, Cultural and Scientific Organization (ALECSO) (Tunisia)

Prof. **H. Russel Botman**, Rector and Vice-Chancellor of Stellenbosch University (South Africa)

Moderator
Prof. **Yvon Fontaine**, President, Agence universitaire de la Francophonie (AUF) (Canada)

H.E. Dr Mohamed El-Aziz Ben Achour
ALECSO

The challenge that has faced schools throughout the modern era is what they are expected to teach tomorrow and what sort of individual they should shape. The main issue at stake is how schools should interact with new Information and Communication Technologies (ICTs), because they can no longer afford to ignore them or deal with them through traditional audiovisual means. ICTs have played an increasingly important role in everyday life as well, with particular effects on children, who are exposed early on to these technologies. This means they are equipped with a culture that determines attitudes, ways of communication and modes of learning. Therefore, schools need to review the outcome of research conducted by specialists in this field.

The other major issue is the skills and values schools are meant to supply to the younger generation to enable them to deal effectively with the evolving world. The list of skills must be combined with moral and civic values. New technologies may facilitate the work of teachers if effective training programmes are implemented. No progress can be achieved without the ability to convey these values. The Arab League Educational, Cultural and Scientific Organization (ALECSO) has made educational reform in Arab countries its top priority for the coming years, and its education development plan, spanning a period from 2008 to 2018, is based on this approach. We must give quality a central position if this scheme is to work. Following a Ministerial Colloquium in Doha in September 2010, the Doha Declaration presented an action plan elaborated around four programmes: research and evaluation on education quality; teacher-training policies and professional development; early childhood educational development; and curricular innovation, qualifications and ICTs in education.

Prof. H. Russel Botman
Transforming Pedagogical Values

I support the contention that education is responsible for instilling in students an understanding of, and respect for, human diversity, heterogeneity and interdependence. The central idea of Ubuntu philosophy - that a person is a person through other people - became an important mantra in the context of the 1994 elections and can be seen as a corrective to the exclusiveness of apartheid. Educational institutions in South Africa face both an educational and a moral obligation. Previously, the mission of institutions like Stellenbosch University was defined in terms of homogeneity, exclusivity and ethnic interests. The transformation required a total reorientation of values and this was marked by the need to look back to the past history of racism and forward to a common, diverse future.

This led to two important decisions: the acknowledgement that Stellenbosch had contributed to these injustices and a commitment to be part of redressing them. We are now at a point where there is broad consensus that it is no longer the preserve of a specific group but a global participant in education. I proposed the development of a critical pedagogy in line with the Brazilian educator Paolo Freire's pedagogy of hope, the idea that education should empower people to become agents of change. Stellenbosch distilled five guiding themes from the Millennium Development Goals (MDGs): eradicating poverty and related conditions; promoting human dignity and health; democracy and human rights; peace and security; and a sustainable environment and competitive industry. Taken together, our five development themes and 22 academic initiatives are known as the Hope Project.

Our graduates' attributes are generally seen to go beyond technical knowledge and the private good to include qualities which prepare them as agents for social good. Institutions must embody and institutionalise the values embedded in the MDGs to create the changes we want to see in the world.

Education should empower people to become agents of change.

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani

ROTA and Youth Empowerment

Sixty per cent of the Middle Eastern population is under 29, 15% are out of school and 16 million young people are unemployed. Research indicates that 100 million new jobs are needed in the next ten years. However, the response has been very slow. Despite improvements in formal education, the connection between education and employment remains absent. It is therefore our primary responsibility to create global citizens and provide young people not just with an education but also exposure to the real world and its responsibilities. We try to do this by promoting four main ideas: critical thinking; voicing their opinions; respecting others; and coming up with innovative ideas. Our goal in ROTA is to lead, serve and advocate, both formally and informally. It is also important to allow young people not only to serve but also to lead and advocate. Finally, we aim to connect rural with urban areas, hoping that more developed local communities will help the less developed.

Despite improvements in formal education, the connection between education and employment remains absent.

Questions and Answers

Prof. Yvon Fontaine, Moderator: Is enough being done to ensure rural communities in less developed countries have access to these technologies?

Prof. H. Russel Botman: Our major commitment should be to new ways of learning and new ways of connecting researchers.

Prof. Yvon Fontaine

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: Developing countries do not have basic infrastructure, making it difficult to spread technology, but there is a lot to be done in all sectors.

Prof. Yvon Fontaine: Do you have any recommendations for how to succeed in undertaking change?

Prof. H. Russel Botman: The most difficult thing is to make people wonder about the future rather than just analyse the past. People want to do it, but they just require leadership.

Prof. Yvon Fontaine: How do you inspire young people with hope for tomorrow, making this a larger community?

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: We have as much to learn from them, at conferences such as WISE, as they do from us.

From the floor: What are you doing to help those who might not have the opportunity to become global citizens?

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: We are actively engaged in the countries we are working in.

From the floor: Most students know much more about ICT than their teachers and there would be great results from giving them an opportunity to develop their own ways of using it.

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: Young people should lead at the higher levels.

From the floor: How do we reconcile the need to be good national and regional citizens with being good global citizens?

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: I do not mean that you should lose your local identity. National identity becomes more important with globalisation.

From the floor: Maybe we should stop thinking in terms of classrooms and look at education as a process of learning through life.

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: Social networking is an example of that and we have some programmes which incorporate these technologies. However, you need educators and the right curricula.

Prof. H. Russel Botman: The massification of education means that it cannot be confined in classrooms but must expand into virtual spaces and the world outside.

From the floor: Maintaining local values while adopting global ones may cause cultural contradictions. How do you ensure that is not the case?

H.E. Sheikha Al-Mayassa bint Hamad bin Khalifa Al-Thani: Arab mothers should speak to their children in Arabic. It is fine to send your children to a private school but do not lose the language spoken at home.

The most difficult thing is to make people wonder about the future rather than just analyse the past.

National identity becomes more important with globalisation.

Education and Reconciliation

" *We need a new arsenal of tools to change the paradigm, to change the path. We know that by bringing people from different backgrounds together on an equal basis we extinguish prejudices and we cause them to work together as teams towards a common goal. It changes attitudes and behaviours.* "

Dr J. Michael Adams, Moderator

Speakers

Dr **Fanie du Toit**, Executive Director, Institute for Justice and Reconciliation (South Africa)

Mr **John Gregg**, Interim Director, Education Above All (Qatar)

Prof. **Brandon Hamber**, Director, The International Conflict Research Institute (INCORE), University of Ulster (UK)

Ms **Joke Van Der Leeuw-Roord**, Founding President and Executive Director, the European Association of History Educators (EUROCLIO) (The Netherlands)

Moderator

Dr **J. Michael Adams**, President-Elect, International Association of University Presidents (IAUP) (USA)

John Gregg
Effects of Conflict on Education

A recent report by UNESCO finds that systemic targeting of teachers, students and educational institutions has been reported in greater numbers and more countries since the first report in 2007, with examples in Afghanistan, Georgia and India. There are other direct impacts which also occur in natural disasters, including loss of livelihood for families, insecurity of the civilian population, disrupted educational activities and reduction in educational quality due to population dispersal.

The effects of individual attacks or threats of attack have long-term impacts on education. If displaced people do access education, how is that recognised on their return to their community, and how can a skilled workforce of teachers be maintained? We see a weakened teaching workforce and further setbacks for girls' education. Measures to increase girls' access to education fall by the wayside, and there are proven long-term disruptions in education, including impacts on livelihood, health, equity, environmental sustainability and a broader skilled workforce. Education Above All is engaged with many partners in the field of protecting education, including international law-making and coordinating bodies, higher-education actors, UN agencies and NGOs.

Goals will include promotion of enhanced monitoring systems and strengthened legal accountability in prevention of, and response to, these attacks. Data in relation to attacks is limited and disjointed, whether concerning incidences, prevalence, motivation or prevention and response. There are inconsistencies in terms of measurement, insufficient geographical coverage and insufficient population coverage. The exacerbating effects of crisis on education may be mitigated through more equitable access, stronger community involvement in security and management, and psycho-social support, counselling and conflict-resolution training.

> **Systemic targeting of teachers, students and educational institutions has been reported in greater numbers and more countries.**

Prof. Brandon Hamber
Peace Education

Education is central to shaping attitudes and social interaction and both are critical to addressing the legacies of conflict. It can also be used to entrench segregation and breed hostility. A growing range of strategies has emerged in recent years aimed at educating young people about the dangers of racism, xenophobia and political conflict. There are debates about whether these strategies have a long-term impact, or are short-lived, and to what degree they are transferable to real-life conflicts. However, a growing base of research shows that such programmes do have positive impacts. Such groups as Facing History in Ourselves in Boston demonstrate that young people show increased civic knowledge, greater empathy and knowledge of history and reduced bigotry. Teachers who engage in these programmes have also been shown to have increased enthusiasm for their work.

Two challenges are the nature of interaction and the way in which conflict is taught. Firstly, intergroup contact typically reduces intergroup prejudice, but it is the type and context of contact that matters. The most successful schools in peace education focus explicitly on breaking down division and promoting new social interaction. Secondly, one of the key issues for many societies is the cause and nature of the conflict from which they are emerging. Most contemporary thinking now focuses on how we develop critical thinking skills rather than just focusing on a central narrative. There is an imperative to develop an education system which does not just focus on reading, writing and arithmetic but also equips young people to deal with issues of peace and diversity.

> **Education is central to shaping attitudes and social interaction and both are critical to addressing the legacies of conflict.**

Dr Fanie du Toit
Educators and Reconciliation

South Africa's democracy is based on two basic constitutional principles: that South Africa belongs to everyone who lives in it; and that social justice should be the test of everything we do. This framework of

Fanie du Toit

reconciliation and justice has replaced "Christian Nationalism" – the education strategy of apartheid - as the framework for education. Reconciliation is increasingly seen as the means of working towards social justice.

It is clear that the education system should support efforts to build national unity by constructing a shared perspective on history after conflict without creating new hegemonies. The Truth and Reconciliation Commission (TRC) was the first step in this dialogue. A survey conducted in 2001 found that, although the TRC was seen to be perpetrator-friendly, 76% of black South Africans supported it. Ninety-four per cent of blacks and 73% of whites said that apartheid was a crime against humanity. Therefore, post-conflict societies cannot afford to deny the past. Secondly, educators themselves experience all the insecurities, biases and fears associated with massive social change and we have underestimated the extent to which they need hands-on support and resources to become effective conduits of justice and reconciliation.

Thirdly, the bigger socio-economic picture can undermine any effort to educate in reconciliation. However, this inequality cannot be tackled without education, creating a mutually reinforcing dynamic.

Post-conflict societies cannot afford to deny the past.

Joke van der Leeuw-Roord
Teaching History

Critical thinking is very important, along with the opportunity to question simplistic approaches and interpretations of the past. EUROCLIO tries to identify crucial features of an environment conducive to reconciliation, a professional approach, new historical paradigms, innovative methodologies and a suitable project context. Firstly, we have to make teachers responsible for their own teaching, so capacity building and collective responsibility are essential. Secondly, it is important to open up to wider geographical dimensions, new types of history, and new and more diverse topics. Thirdly, history is about questioning and about respecting the fact that

History is about questioning and about respecting the fact that there are different stories.

there are different stories. Fourthly, those embarking on these projects need to show civic courage, and to create a sense of trust. Above all, one needs to take plenty of time in which to address difficult issues. The big question is whether such an approach leads to reconciliation. There is very little evidence as to whether it is having an impact but it does help to lessen tensions in places where there might be conflict.

Another question is how a professional group can effect change, and, in this context, three other groups are crucial. Academic historians need to offer high-quality research. There need to be sufficient resources to allow the work to continue over time, and donors should realise that basic rather than spectacular measures are the most helpful. Finally, it is difficult to engage politicians to support this work, but it is impossible to make changes without their help.

Questions and Answers

Dr J. Michael Adams

From the floor: We cannot talk about reconciliation as long as 40 million children are out of education owing to conflict and there should be practical solutions to this issue. Thirdly, why teach children about peace and development if there is no practical outcome for them?

John Gregg: Part of the challenge is to approach donors about taking a longer-term approach to crisis situations.

Prof. Brandon Hamber: We cannot just jump into a reconciliation process. There must be a structural approach.

Dr Fanie du Toit: The mistake in South Africa was to focus exclusively on infrastructure. We should not have allowed so many teachers to leave and we should not have confused them with curriculum changes.

From the floor: How can the media and technology play a role in challenging stereotypes and creating better mutual understanding? Secondly, we should not ignore the religious roots of conflict and exclude religious leaders from the process. Thirdly, could you comment on the relationship between power and education?

Joke van der Leeuw-Roord: We have created a programme which develops a variety of learning tools using Information and Communication Technology (ICT).

Dr Fanie du Toit: The South African reconciliation process was the outcome of a balance of power. The question is whether both sides are organised to broker a settlement. Regarding values, cosmopolitanism is important but we need to teach children the worth of their own values.

Prof. Brandon Hamber: Regarding ICT, we should not use innovation for its own sake to replace what has been proven to work. The value of the tools is in how you use them.

Dr J. Michael Adams, Moderator: Do you have one action point you want to share with us?

John Gregg: People in power are often not held responsible for their actions and the major priority is to ensure attacks on education become unthinkable to them.

Prof. Brandon Hamber: The big issue for me is how we take on the responsibility of developing critical abilities to engage with these issues.

Dr Fanie du Toit: Start with the voices of the victims, walk with the teachers and tackle socio-economic issues head on.

Joke van der Leeuw-Roord: There should be continuous investment in the development of responsible and innovative teachers who can, in turn, develop critical thinking skills in their students. This is good for the future both of the students and the society they will live in.

Start with the voices of the victims, walk with the teachers and tackle socio-economic issues head on.

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awards 2010

Classroom in Afghanistan, ▶
Rewrite the Future,
Save the Children (UK)
- leading for
Save the Children International -
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Mother Child Education Program ▶▶
(MOCEP) (Turkey) -
© ACEV (Mother Child Education
Foundation)

Learning from Reforms of National Education Systems

"In the complex set of actions that lead to reforms, three things are key. The first is political commitment which needs to be sustained for at least five to six years, the minimum time for this reform to take shape. The second is the importance of assessment and monitoring and evaluation because if you don't have a good assessment system you don't know where you start from and where you are going and whether you are meeting your objectives. Third is teachers. Teachers need to be part of the equation and investing in teachers is key to any successful reform."

Mourad Ezzine, Moderator

Speakers

Ms **Sabah Al-Haidoos**, Education Institute Director, Supreme Education Council (Qatar)

Dr **Kiyong Byun**, Associate Professor, College of Education, and Vice-Director, Higher Education Policy Research Institute, Korea University (Republic of Korea)

Rt. Hon. **Charles Clarke**, former UK Secretary of State for Education and Skills (UK)

Moderator

Mr **Mourad Ezzine**, Education Sector Manager, Middle East and North Africa, The World Bank (Washington, D.C.)

Rt. Hon. Charles Clarke
Being Masters of Change

The process of change is lifelong and requires engagement through every stage but, with regard to schools, there are five levers: effective leadership; high-quality teachers; high aspirations and standards throughout the whole system; a modern curriculum; and modern resources. Regarding leadership, the school's ethos should be clearly understood and should guide action, and leadership should operate at every level in the school, but the head teacher should encourage and promote that leadership. It is vital that the school is accountable to the community it serves. Effective school leadership also depends on effective partnerships with the local community, other institutions and local employers.

Secondly, it is not simply a case of having more teachers. The most difficult question is how quality can be encouraged and inspired in teachers. That requires high-quality recruitment, initial training in both theory and practice, and continuous professional development. Thirdly, not all education systems follow through on their lip service about quality. The role of the school system is to ensure that everyone's potential can emerge, but that means that high aspirations and principles must be measured, assessed and inspected so that they are implemented. Fourthly, curricula issues are different in different countries. Literacy is the first and most important requirement and, beyond that, an academic framework is required which reflects the core subjects and develops a wider range of skills.

Finally, money is not everything in education, but students learn better and teachers teach better where there are modern resources. However, putting in equipment is no use unless it is partnered with the teacher's ability to use that equipment. Educational partnerships are needed to reinforce those modern resources. Consistent national focus and leadership are required to achieve these five aims, with widespread popular support and engagement and a forward-looking perspective.

It is vital that the school is accountable to the community it serves.

Sabah Al-Haidoos
Educational Reform in Qatar

Educational reform in Qatar has aimed at addressing a number of challenges and making the most of available resources. The education system is decentralised, part of a collective endeavour, and is based on autonomy, accountability and responsibility. There is no single model, and there is freedom of choice across a range of diverse models. We need to train individuals in order to fill the gap in terms of human capital.

Accountability is vital to achieve the best outcomes, whether the schools are public or private, and a number of scholarships are offered to ensure that all children have the opportunity to access education, whether public or private. We use a national assessment tool along with internationally approved assessment tools, and we vet students, schools and the system as a whole. There are professional development programmes for both teachers and school leaders, and there are specific criteria against which schools are evaluated depending on the level. We also want the gap between secondary and higher education to be filled and we uphold the value of transparency.

We need to train individuals in order to fill the gap in terms of human capital.

Dr Kiyong Byun
Reform of Higher Education in Korea

The Korean government has taken several steps to incorporate English into the core functions of universities, resulting in the concurrent use of English and Korean. This has put pressure on academics to publish in international journals and hold international-level meetings in English. The use of English in higher education has had far-reaching implications: 9,000 courses in 200 Korean universities, or around 2.2%, have been conducted through English since 2006. Policies have been introduced by the government to link teaching in English with funding received.

English Medium Instruction (EMI) was first introduced at Korea University in 2000 and, since 2009, the two main policies have been: firstly, that all professors hired since 2003 must teach all classes in English; and secondly, that students must take at least five courses in English to graduate. The proportion of EMI in all courses was increased from 10% in 2000 to 38% in 2008, and the number of foreign students and professors has nearly tripled during the same period. Students are generally satisfied with the courses and believe that their command of English has improved. Therefore, EMI seems to have been a success.

The question we need to discuss is whether EMI is the best solution to cope with the growing role of English in the international labour market.

However, this is not necessarily the case. The guiding assumptions are that, firstly, the more exposure students have to English, the more they will be able to learn English while also learning the subject, and secondly, familiarity with English is assumed. These assumptions are not always borne out: there is growing concern that EMI may hinder subject acquisition. Compulsory EMI can result in the need to provide individual assistance and so additional resources. Another concern is that linguistic proficiency can take precedence over academic qualifications in appointment decisions. So the question we need to discuss is whether EMI is the best solution to cope with the growing role of English in the international labour market.

Questions and Answers

Mourad Ezzine

Mourad Ezzine, Moderator: What is a 21st-century curriculum and how do you teach it in the UK?

Rt. Hon. Charles Clarke: There will always be a dispute about the right curriculum, but you have to look at the skills that will be necessary to survive and work in the modern world, such as communication skills and articulacy.

Mourad Ezzine: How do you link assessment to accountability in Qatar?

Sabah Al-Haidoos: It goes beyond accountability. We are seeking to improve our system through the international assessment programmes and compare ourselves to others to understand our needs.

Mourad Ezzine: What incentives were used in the shift to EMI in Korea?

Dr Kiyong Byun: The most powerful incentive was to link funding to institutional performance. Unfortunately, institutions may focus on fulfilling quantitative criteria at the expense of quality to obtain more funding.

From the floor: What would your focus be without fundamental changes in curriculum and assessment? Dr Clarke, is educational reform not a natural response to political and social reform? Ms Al-Haidoos, do you have any assessment tools for measuring the success of high school graduates? Dr Byun, at what stage are you introducing English, and have you considered using it at secondary level? Ms Al-Haidoos, what measures have been taken to accustom educational leaders to decentralisation?

Dr Kiyong Byun: Education through English starts in the third grade of elementary school, where it is done separately. Five hours of English per week are taught at secondary level.

Sabah Al-Haidoos: Results have improved and we are adapting to this qualitative leap.

Rt. Hon. Charles Clarke: Some of the basic skills are relatively universal across curricula, but it is important for young people to develop a curriculum for themselves as well. There are many forces which oppose educational reform, and it is difficult to incentivise people to change.

From the floor: What is the role and importance of political will in sustaining transformation? Dr Clarke, how do you avoid compromising quality where there are teacher shortages? Does the recent rise in state-funded faith-based schools amount to a regression?

Dr Kiyong Byun: Education reform has changed rapidly without any clear direction. This is how political will manifests itself.

Sabah Al-Haidoos: Reforms were driven both by societal needs and by political will, but we want to decentralise decision-making to regions and schools.

Rt. Hon. Charles Clarke: Education is a question of determination and prioritisation, but also of consensus among the different social forces. Regarding teacher shortage, you also need to invest in quality, but we may not be applying expertise where the need is greatest. Finally, faith schools often have the best ethos of all. It depends on what is being taught and how.

Mourad Ezzine: What is the single most important lesson you have learned?

Rt. Hon. Charles Clarke: You have to support, strengthen and lead the capacity of teachers to lead their students.

Sabah Al-Haidoos: Educational initiatives need to include risk and problem management to succeed.

Dr Kiyong Byun: The most important thing is consistency of policy.

Educational initiatives need to include risk and problem management to succeed.

Access to Quality Education for All

" First is the need to empower teachers as leaders to take control of appraisal and assessment so that they feel empowered to effect change. This was in conflict with national top-down systems. One of the key questions was how you marry these two together. "

Prof. John Wood, Moderator

Speakers

Ms **Jenny Lewis**, CEO and Company Secretary, Australian Council for Educational Leaders (ACEL) (Australia)

Dr **Bálint Magyar**, Member of the Governing Board, European Institute of Innovation and Technology, former Minister of Education (1996-1998; 2002-2006) (Hungary)

Dr **José David Weinstein Cayuela**, Vice-President of Education, Fundación Chile, and former Minister of Culture (Chile)

Moderator

Prof. **John Wood**, Secretary General, Association of Commonwealth Universities (ACU) (UK)
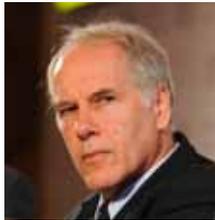
Dr José David Weinstein Cayuela

The Challenge of Aligning Assessment with Student Learning

Chile has created possibly the most powerful educational assessment system in Latin America and has given a lot of important information. This information is used to grade schools by a scoring system. Because these scores tended to be unclear, an attempt was made to create definitions. This information is important in allowing schools to have a general picture of their standing. However, it is not sufficient. We have tried to establish a complementary system giving specific information, not just in general comparative terms, and this information can be used to influence the way schools teach. This system is called Mejor Escuela or Better School.

It is also useful in assessing the capacity of teachers and enabling improvement mechanisms to be implemented. There may be a highly developed national assessment system, but the tools may not be available to individual schools or classrooms. In many cases, teachers may not have the skills to evaluate how children have progressed. Therefore, the capacity to work with and train teachers in the classroom is absolutely critical. This is done by modelling teacher behaviour through consultants and external teachers.

The capacity to work with and train teachers in the classroom is absolutely critical.

Therefore, while there may be improvements in assessments at national level, there also need to be other tools which can be used at school level. It is important to align the results of national tests with school-level information and to align the different methodologies.

Jenny Lewis

Capacity Building for Educational Leaders

Reforms are sometimes sacrificed to other issues and unplanned inputs. They are designed for political purposes in the first place and are dropped because the wrong political party introduced them to begin with, because reforms are measured by criteria other than educational outcomes or because of the length of time a party is in power. Many educators have no access to international testing because of the associated costs. Therefore, criteria for a common playing field and a wider workforce to implement them are required.

While benchmarking can be heavily biased towards performance indicators and standards, best practices and quality models are the best change agents for many countries. Some of the schemes from high-performing countries are key indicators for successful projects, such as student-centred education, access for all, stable funding and accountability. Many countries are starting to look at capacity building of leaders within schools and what needs to be in place for leaders to create reforms, and they are starting to move from a competency to a capability leadership framework. We need to start to think about those who have to implement and sustain change and grow capability from classroom to system leadership.

Best practices and quality models are the best change agents for many countries.

Dr Bálint Magyar

Digital Literacy

Gaining digital literacy should be considered a human right. The presumed knowledge set to be provided by schooling changes with time, but the faster it changes with technology shift, the sooner this set becomes outdated. Without lifelong learning, countless people would be deprived of the chance to update their knowledge. Digital literacy enables participation in education, helping people to access more opportunities to learn and maintain their value to the community.

Gaining digital literacy should be considered a human right.

The right to public participation may also be considered a human right and effective public participation depends on access to accurate and comprehensive information. Digital literacy therefore becomes a precondition for public participation. Lifelong learning still does not form part of the right to education in international agreements, but

it should be protected in this way. Digital literacy should be attained at primary level as a human right and the right to become digitally literate granted as part of lifelong learning. Digitally illiterate people are prevented from fully accessing their rights because they lack the skills, so this should be declared as a right with accompanying legal obligations at government level.

It is necessary to force governments to devote public resources to providing digital skills and access to everyone. Recommendations and strategies are insufficient; legal guarantees for digital literacy are essential. These measures will increase social cohesion, generate markets and increase the efficiency, competency and competitiveness of individuals and societies.

Questions and Answers

Prof. John Wood, Moderator: How do you empower teachers to take ownership of assessment?

Dr José David Weinstein Cayuela: There is an imbalance between accountability and support. Countries need to provide better conditions and build capacity for teachers.

Prof. John Wood

Jenny Lewis: Leadership capacity building should be made part of teacher training and teacher empowerment has to be central to reforms.

Prof. John Wood: To what extent can linking schools across different countries help this empowerment?

Jenny Lewis: A number of child-managed projects are being rolled out in Namibia and Papua New Guinea, concerned with overcoming some of the key issues facing them and encouraging quality learning.

Dr Bálint Magyar: Countries need to be aware of what is going on around the world but should not simply adopt initiatives without awareness of context.

Prof. John Wood: How do we ensure that the content being accessed by teachers is accurate?

Dr Bálint Magyar: Universities are resistant to adopting new models for historical reasons. While a lot of teachers are open to new methodologies, the majority are conservative. The question is how best practices can be made to permeate the entire spectrum.

From the floor: How do we bridge the gap between localised initiatives and government policy? Does an insistence on digital literacy, empowerment, devolved assessment etc. shift attention from ensuring access to education for those deprived of it? What meaning does education have in families where no one has a job, or in the Australian aboriginal population where their own learning has been ignored and unworkable solutions have been imposed?

Dr José David Weinstein Cayuela: We need national policies, but also opportunities to develop initiatives at local level. It must also be possible to connect these different levels. Secondly, the challenge is to think in terms of access and quality at the same time.

Jenny Lewis: The constant theme we are seeing is the need for capacity building. We have to focus on leadership to ensure access and quality.

Dr Bálint Magyar: Digital rights create a compelling mechanism for putting pressure on governments, even in poorer countries. Shortage of funds is not the major question in Eastern Europe, for example, so much as wasteful spending.

From the floor: Is compulsory early childhood education not also an essential requirement? How can institutions and international organisations provide access to quality education for African and Brazilian people? How broadly do you define digital skills, and what contribution can be made by television and mobile phones, for example? How do we protect the future of education from being compromised by economic demands?

Jenny Lewis: Many countries are investing significant time and effort in delivering early childhood education, with the result that outcomes are improved dramatically.

Dr Bálint Magyar: Early learning is very important. Surveys indicate that the majority of dropouts in Hungary come from groups who did not attend kindergarten. Regarding segregation, there has been pressure to segregate poor and disadvantaged children, so we have implemented anti-discrimination laws and financial incentives. Television and other means do create greater possibilities for opening up access to education. Finally,

people in Europe change professions several times, meaning that we need to be able to provide lifelong education.

Dr José David Weinstein Cayuela: Educational policy has three goals: to improve human capital; improve political coherence; and reduce inequity. However, countries need long-term policies to attain these objectives.

Prof. John Wood: Digitisation allows people's democracy far more than under traditional media, but we need to teach people how to access information, and that is what education is all about.

From the floor: We know that teaching is perhaps the most important societal task, but what should we teach our teachers to be? How can we help young learners evaluate teachers in practical ways? What suggestions do you have for funding accessibility?

Dr José David Weinstein Cayuela: Empowerment is the most important thing we can do in teacher training, but it is not just about technology. Teachers have a moral purpose in educating children and we need to reinforce that idea. Regarding assessment, it is important to cultivate a common procedure for sharing different views and criteria.

Dr Bálint Magyar: It is necessary to select the right people to be teachers and to ask the question of what we teach those who are capable of being teachers.

Prof. John Wood: Can I have one action point from each of you?

Jenny Lewis: We need to use the information from the Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) and problem-solve across our respective countries.

Dr José David Weinstein Cayuela: It is important to reduce the gaps between international, national, school and classroom assessment systems.

Dr Bálint Magyar: Literacy means digital literacy in the 21st century. Without it, people cannot be active members of society.

Digitisation allows people's democracy far more than under traditional media.

It is important to reduce the gaps between international, national, school and classroom assessment systems.

Workshop

Rebuilding the Education System in Haiti
A Case Study

> *Rebuilding the education system there is **obviously a major challenge**, but it is also an opportunity for the global community to unite in seeking innovative ways to build an education system from the ground up. WISE calls for the establishment of a task force to be joined by willing international partners, to examine the situation in Haiti and report back to us with a concrete action plan for education.*

H.E. Sheikh Abdulla bin Ali Al-Thani, PhD
Chairman of WISE
Qatar Foundation

Getty Images/AFP

On 12 January 2010, Haiti suffered a catastrophic earthquake that affected three million people, leaving 316,000 dead, 300,000 injured and 1.5 million homeless. There was widespread damage to vital infrastructure, including schools. The education system was already dysfunctional before the earthquake, but afterwards, according to Minister of Education Joël Desrosiers Jean-Pierre, it "totally collapsed". The disaster left thousands of schools destroyed or damaged and 2.5 million children with no access to education.

This Workshop, prepared in partnership with Agence universitaire de la Francophonie (AUF), tackled the particularly severe education challenges encountered in Haiti. In a first session, WISE attendees were invited to listen to a presentation on the state of the education system in Haiti and discuss concrete and innovative case studies of rebuilding education systems there and possibly in other disaster-affected zones. A second session, involving a smaller number of individuals – including Michèle Pierre-Louis, former Prime Minister of Haiti, and Jacky Lumarque, Rector of Quisqueya University - focused on formulating precise recommendations and involving their organisation or themselves in rebuilding the education system in Haiti.

The Workshop resulted in the Closing Plenary Session announcement of the creation of a special task force for Haiti.

This task force will be a collaborative venture, involving WISE Partners such as AUF, UNESCO and RAND, Haitian representatives and WISE community experts who participated in the Workshop.

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Improving Education Systems

"The session on Improving Education was really fascinating. What we had was several really important case studies of how you can improve education systems and how they could be scaled up to be applied elsewhere."

Mike Baker, Moderator

Speakers

Prof. **E. Nigel Harris**, Vice-Chancellor, The University of the West Indies (Jamaica)

H.E. Prof. **Fasli Jalal**, Vice Minister of National Education (Indonesia)

Mr **Michael Stevenson**, Vice-President, Global Education, CISCO (UK)

Dr **Qian Tang**, Assistant Director-General for Education, UNESCO (Paris)

Moderator

Mr **Mike Baker**, education journalist, broadcaster and author (UK)

Dr Qian Tang
Capacity Building

Development agencies must rethink their way of working if we are to improve national learning outcomes. Simply building schools, training teachers or distributing books do not guarantee that learning will take place as such projects do not result in wider policy reform. We need to develop the capacity of all actors if we are serious about large-scale educational reform. Improving governmental capacity will ensure that education systems respond to the real needs of society.

UNESCO has emphasised four levels at which capacity building should take place. The first is that of individual officers, particularly in government planning and management teams. The second is organisational, where the challenge is to improve the effectiveness of working methods and to incentivise better teamwork. The third level is that of the public service: reform must have strong national leadership and adapt to the particular circumstances of administration. Finally, external assistance from bilateral and international agencies must be long-term and lead to a genuine transfer of skills, particularly in fragile states. These four factors must be integrated within a common capacity-building strategy which uses local knowledge and is based on strong national ownership.

UNESCO supports countries in developing strong, holistic and balanced educational systems, and developing the capacities of all stakeholders is essential. We have devised the UNESCO Capacity Development for Education for All programme (CapEFA) for this purpose, pooling funding from different donors to help countries improve the effectiveness of their educational systems. One example of the implementation of this scheme was Côte d'Ivoire, where the challenges included insufficient links between the labour market and training availability, outdated curricula, and lack of quality data. The development strategy prepared in collaboration with UNESCO aimed to develop capacity in five areas: leadership; institutions; organisation; quality and equity; and knowledge generation. Progress has been made. Capacity development is always linked to a set of rules, norms and practices, many of which are not under the control of the Ministry of Education. UNESCO's approach is to involve all stakeholders and identify new tools and mechanisms.

We need to develop the capacity of all actors if we are serious about large-scale educational reform.

H.E. Prof. Fasli Jalal
Upgrading Standards in Indonesia

The teacher is the most important contributor to education outcomes. However, only about a million out of 2.7 million Indonesian teachers fulfil the criteria. Furthermore, there are serious inequities in teacher distribution: 66% of schools in remote areas do not have enough teachers. There is also the challenge of absenteeism. Teachers are also disadvantaged in terms of remuneration.

The government enacted a law in 2005 which specified that all teachers had to upgrade their qualifications to at least a four-year diploma. Secondly, they had to go through a professional certification process. Teachers assigned to remote areas are given a location incentive. The aim is to ensure continuous professional development through a performance reporting system with associated incentives and disincentives. About $5.5 billion (US) will be paid in professional and location incentives by 2016.

Regarding impact, the salary for certified teachers has been doubled, and tripled in the case of teachers assigned to remote areas. Teacher absenteeism has declined to 15% from 20% in 2003. Induction programmes are to be introduced from next year, and a scheme for linking salary increments to performance and promotion is being devised. One problem that still needs to be addressed is ensuring continuous professional development across 78,000 villages.

The teacher is the most important contributor to education outcomes.

Prof. E. Nigel Harris

Improving Education in Vulnerable Small Island States

The University of the West Indies was established in 1948 as a college of the University of London, but became independent in 1962. The countries served are spread across one million square miles of the Caribbean Sea, are tiny and vary widely in terms of population, GDP and human development index. The largest is Jamaica with about 2.8 million inhabitants, but many of them have fewer than 200,000. The emphasis is on areas relevant to the Caribbean: tropical medicine, agriculture, crime and security, economics and finance, entrepreneurship, climate change, disaster management, renewable energy and culture.

The student population grew to about 22,000 between 1948 and 2002. The campuses tend to replicate faculties and teach their own curricula without much communication among them. One of the issues we face is that the growth of the university took place mainly in the countries where the campuses are located, but there are populations scattered across the Caribbean that do not have access to the programmes provided by the three campuses. There has been considerable demand for increased access, and we have responded with a series of five-year access plans, the latest of which emphasises learning and teaching, growing graduate programmes and extending outreach. The challenges are financing in the face of budget reductions, increasing competition from universities outside and inside the region and the risk of fragmentation.

The solution is to create a single virtual university space that consolidates and integrates the distributed technologies and learning resources.

The solution is to create a single virtual university space that consolidates and integrates the distributed technologies and learning resources, enabling students, researchers and academics to become part of one learning space and connect with other institutions around the world.

Michael Stevenson

Transformation, System Leadership and Assessment

Improvement is not enough; transformation will drive education and economic development. Cisco has synthesised a body of ideas known as Education 3.0. The core idea is that the development of higher order capabilities for learners around the world should be at the centre of system change. Everything else – from pedagogy to metrics - must be aligned to support it.

Curricula, teaching and learning, and assessment need to focus on building the skills required to solve complex problems while often working with international teams and manipulating discipline-based knowledge. Building design, culture and leadership are also important factors. Two crucial enablers in this process are connectivity and continuous professional development. Having tested this approach, Cisco has learned that effective change must be holistic, with a new focus on the learner, and that it must adopt a systemic approach.

Effective change must be holistic, with a new focus on the learner.

The Global Education Leaders Program (GELP) is about testing ideas at scale for implementing change at the global and national level. The jurisdictions involved have identified several crucial propositions: the importance of leadership in supporting change; focusing not on technologies but on processes; and finding safe spaces for innovation. However, many of the approaches to issues depend on context: New York is looking at a split-screen approach, continuing improvement while growing disruptive innovations from within, while Finland amplifies radical innovations as they emerge, and Korea is diversifying the means of assessing skills. We are designing practical technology-based assessments for complex team problem solving and social learning in a digital environment, leading to a technical toolkit and a policymaker's manual.
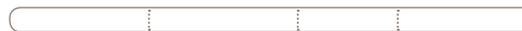
Questions and Answers

Mike Baker, Moderator: What did not work, and what would you do differently?

Dr Qian Tang: One lesson we learned is that you need a holistic approach, not a sectoral one.

H.E. Prof. Fasli Jalal: We should reconsider some of the criteria for certification of teachers in remote areas, as they are not necessarily as prepared as their city counterparts, and improve the certification process itself.

Mike Baker

Mike Baker: Does there have to be a combination of carrot and stick in teacher training?

H.E. Prof. Fasli Jalal: The incentives that have been put in place mean that many high school graduates want to become teachers, which is a big change.

Mike Baker: How applicable would what you did in the West Indies be to other parts of the world?

Prof. E. Nigel Harris: It is possible for small universities to combine to create a critical mass that is more effective than any single entity. The challenge is getting people to work together.

Mike Baker: Michael, how do you overcome political resistance to transformation?

Michael Stevenson: We did find conservative systems which were willing to change, along with systems in emerging countries. This is a measure of how important the issue is for more established societies to take a hard look at this approach.

From the floor: Was quality of education affected by an increased shortage of teachers during the certification process?

H.E. Prof. Fasli Jalal: Teachers do not have to leave the school for academic upgrading. A lecturer from the closest teacher training university comes to them, and they send in their portfolios for the certification process. Only those who do not meet the criteria are required to undertake 90 hours of teacher training remediation.

From the floor: Are there particular skills that educational leaders in charge of technology need to have? Secondly, how do we incentivise companies to put resources into solving the problems? Thirdly, is educational development possible without societal transformation?

Michael Stevenson: The challenge is to strike the balance between achieving what needs to be done and preparing people for substantial change. Educators need to argue that it is in the interest of industry and the economy at large for them to become involved. Thirdly, transformation does not imply a view of the content of the curriculum. Layered over the curriculum is a set of capabilities which can be generated from any curriculum.

From the floor: Professor Harris, how do we maintain the momentum of change?

Prof. E. Nigel Harris: Many of the countries themselves are very small and cannot create universities on their own, so there is a good rationale for keeping the regional enterprise moving towards creating a first-rate university.

From the floor: We need to address improving the tertiary system specifically to improve the system as a whole.

Dr Qian Tang: We need to have a holistic approach if we are to have Education for All.

Mike Baker: What action point would you like us to take forward in terms of improving education systems?

Dr Qian Tang: The international agencies will have to work with all stakeholders.

H.E. Prof. Fasli Jalal: Improving teacher remuneration has to be combined with continuous professional development and the creation of an environment in which the profession is respected.

Prof. E. Nigel Harris: The technology exists for combining groups of colleges, even around specific programmes, and we would be richer if colleges in countries or regions could share resources for offering higher quality programmes.

Michael Stevenson: We need to see an alignment in the private sector combined with a global direction around curriculum and assessment.

> We would be richer if colleges in countries or regions could share resources for offering higher quality programmes.

Leadership Models

" All our speakers said 'go fast'. All said that the 21st century is about change and our educational system has to catch up with this century. It's not like other centuries. And all said that the leader needs to promote change and have a vision of change. They all talked about aspirations. Think about what you want to be in this century. Think about what you'd like to be like and work towards that. Don't worry about making predictions about the future. The future will take care of itself. You take care of your school, whether it's at the primary, secondary or tertiary level, share the vision and make the team come together. "

Dr Allan E. Goodman, Moderator

Speakers

H.E. Prof. **Abdullah bin Abdul Rahman Al-Othman**, Rector, King Saud University (Kingdom of Saudi Arabia)

Dr **Patrick G. Awuah**, Founder and President, Ashesi University (Ghana)

Mr **Toby Salt**, Deputy Chief Executive and Strategic Director for School Leadership Development, National College for Leadership of Schools and Children's Services (UK)

Moderator:

Dr **Allan E. Goodman**, President and CEO, Institute of International Education (IIE) (USA)

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman

Higher Education Reform in Saudi Arabia

The challenge facing the Arab world is to move from an economy based on oil to one based on knowledge, and if we do not manage to achieve this we will not be able to guarantee our children's future. Until a few years ago there were only a few universities in Saudi Arabia, whereas today there are 33. There are 200,000 Saudi students outside the country. There are one million Saudi students at university, and 10% are studying abroad.

We are aware that it is impossible to have a developed country without an education system which is based on the participation of the whole population. An Arab university can only be competitive internationally if it meets four criteria: that it is financially autonomous, that it recruits the best people irrespective of religion or nationality, that educational relationships should be contractual, and that all programmes should be connected with a leading global institute. King Saud University moved from being a teaching institute to being a research institute in 2005 and aims at producing entrepreneurs, not employees.

The challenge facing the Arab world is to move from an economy based on oil to one based on knowledge.

Dr Patrick Awuah

Leadership at Ashesi University

Everything we are doing at Ashesi is driven by a vision: that of an African renaissance led by a new generation of ethical, entrepreneurial leaders, and our role is to educate them. It is about transforming a continent. The means for achieving this is a new model, focused on ethical intelligence, compassion, critical thinking, problem solving, broad perspectives and wisdom. Our approach to leadership is long-term and it begins with values, the foremost being integrity. The vision and culture must be owned by everyone, from students to faculty and external supporters. This is important, because we begin by listening, and we factor everything we learn into the decisions we make.

Our approach to leadership is long-term and it begins with values, the foremost being integrity.

I ask my team once or twice a year to identify, confront and tackle the things we want to change. We hold everyone to a standard of excellence, with students reviewing their courses at the end of each semester so that both students and faculty are accountable. We aspire to improve, but we need to balance our aspirations with patience. Ashesi has a 100% placement rate in corporate Africa and in graduate schools. Some aspects have not worked so well, particularly the honour system for exams and the broad curriculum. Our focus has been too internal, and we need to engage more with others around us.

Toby Salt

The Importance of School Leadership

The rate of change is such that the next generation of children will have to be very differently educated. They need to be more creative, flexible, informed and responsible than any previous generation, so our schools need to deliver more, and our expectations have never been greater. The NCLS (The National College for Leadership of Schools) represents and educates 25,000 school leaders, has 90,000 members, and 6,000 enter our programmes every year. Every one of these has to take the national professional headship qualification. While world systems become more autonomous, school leadership becomes more important, and no school exceeds the quality of its teachers and leaders. Good leadership at government and policy level are also required, along with leaders who share skills, learn from best practice and work beyond their own schools.

No school exceeds the quality of its teachers and leaders.

However, with 23,500 schools we have an issue with making better use of the best leaders, and we are faced with a number of challenges. The first is demographics. There are 2,500 primary schools with fewer than 100 students, and 6,000 with fewer than 250, all with their own head teachers, and there is too much variation within schools. We need to use the capabilities of the best leaders beyond their schools to secure consistency. We now have 400 national educational leaders, and soon will have 1,000. The progress made by schools with their help has been dramatic.

Questions and Answers

From the floor: Is leadership the last stage of teamwork?

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: Hopefully individual work will transfer to teamwork.

Dr Patrick Awuah: A good leader can build and lead a good team, but also listen to it.

Toby Salt: Leadership is not hierarchical and there is always someone else guiding you.

From the floor: How can academic leadership help an institute move ahead rather than just follow trends?

Toby Salt: Great leadership is about studying statistics, setting your objectives and being true to them, but being flexible enough to change.

From the floor: What is the effect of the culture and environment on leadership?

Dr Patrick Awuah: Leadership is not about predicting the future, but looking at the world and changing it by adding value.

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: The educational system is a more important factor than culture.

Toby Salt: I agree that culture drives behaviour, but education is what binds people together.

From the floor: What are you doing to accommodate the different ways students gather information?

Dr Patrick Awuah: You need to recognise the differences across the different educational levels, but move away from the idea that the teacher knows everything.

Dr Allan E. Goodman

> Leadership is not about predicting the future, but looking at the world and changing it by adding value.
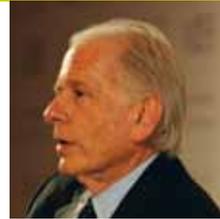
Toby Salt: We have had to change the way we teach leadership development. We have a lot of blended and online learning.

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: We use a strategy of 70% incentives and 30% pressure towards our faculty, so far with success.

From the floor: What is the relationship between the rapid change we are facing and the stability of educational systems?

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: We need to improve quality as rapidly as possible by creating links with the top international institutions.

Toby Salt: Our energies should be focused on the teachers and those who lead them, and they will be incentivised to change.

From the floor: What is the best model of leadership in responding to change? Professor Al-Othman, how does a university in a developing country show leadership?

Toby Salt: There is no one leadership style. I am eclectic. It is up to the profession to use a style of leadership and adapt it.

Dr Patrick Awuah: Building and managing good teams are central to leadership, along with an ability to adapt.

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: A high proportion of our faculty members graduated from leading international institutions, we receive 1.7% of Saudi Arabia's entire operating budget per year in funding, and we also have very good infrastructure. For these reasons, we believe that we should become a leading university in the region.

From the floor: What is your prospective analysis of the results of your pilot experience?

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: The private sector is well integrated into the global economy, so all our graduates have to learn English, but they also have to have general skills and to know how to learn.

We have created partnerships with Cambridge and another university to foster entrepreneurship.

From the floor: Firstly, sometimes there is excellent leadership, but there will be little benefit if there are no resources. Dr Awuah, have you collaborated with other universities in Ghana? You cannot separate teaching from research. Can you elaborate on that point?

Dr Patrick Awuah: We have not done a lot in terms of partnering and this is a mistake we need to rectify. Regarding research, we started with teaching. There are no research funds available in Ghana, but we hope to allot funds out of our budget.

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: You cannot produce knowledge without top research. We needed to solve the issue of funding shortages, and we are making progress on this. We are also building R&D partnerships with the private sector.

From the floor: How does institutional leadership respond to intergovernmental processes such as Bologna or the Doha Declaration? Are environmental constraints not too great in less developed countries to permit this kind of leadership? Professor Al-Othman, did you share your experience with other universities in the region?

Toby Salt: We are not driven by competition, but by a desire for all children to maximise their potential. Education is inherently political, and it does require great leadership.

Dr Patrick Awuah: We are driven more by our vision than anything else. We want to effect change in Ghana and in Africa.

H.E. Prof. Abdullah bin Abdul Rahman Al-Othman: Saudi Arabia should be an advanced country, and King Saud University should play a strategic role in shifting the economy to a knowledge-based one. We have shared our experiences with two universities, and hopefully can do so with more.

You cannot produce knowledge without top research.
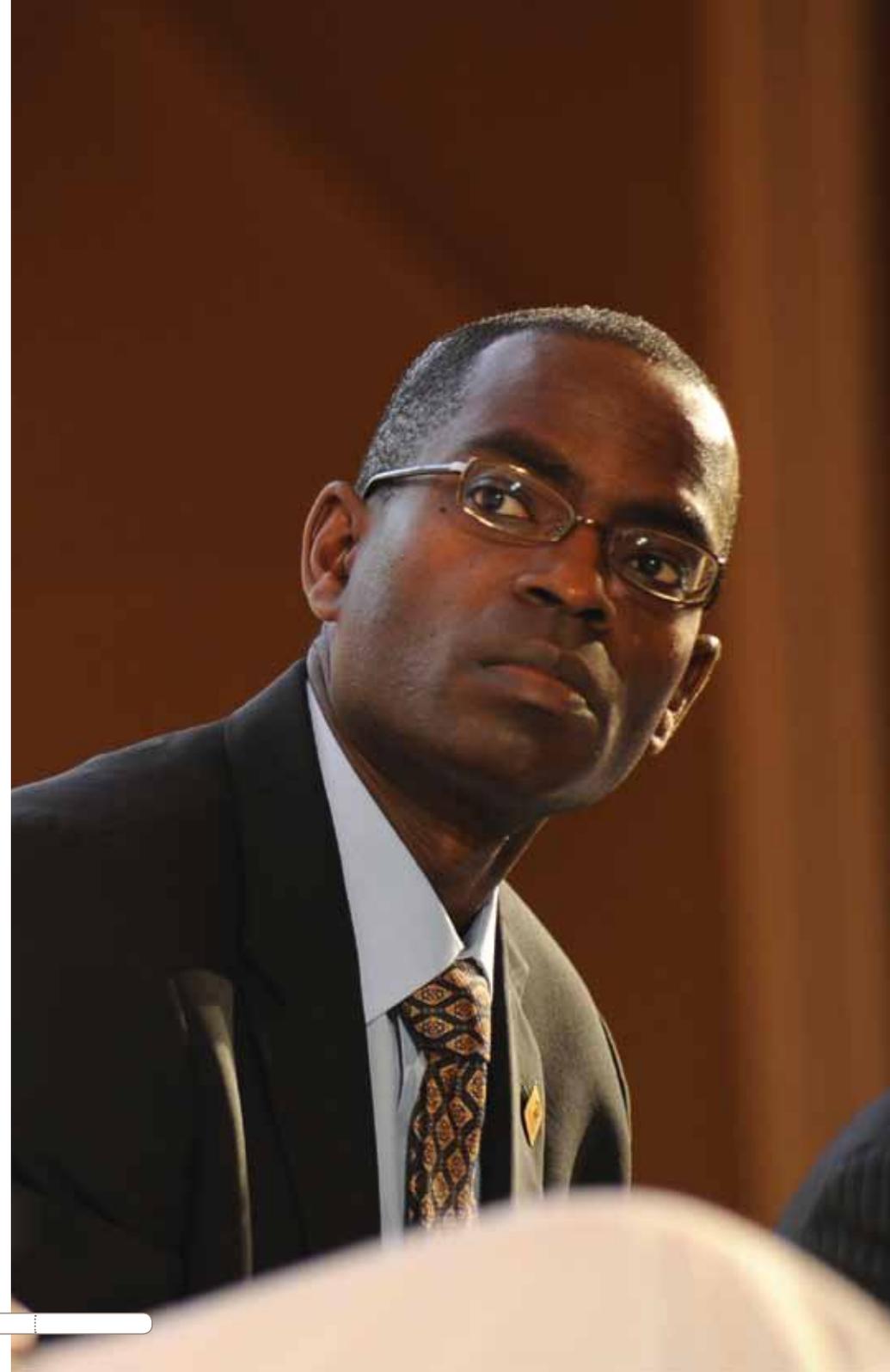
Assessment and Education Improvement

❝ We need to develop new ways of thinking about assessment and new formats for assessment. A lot of those new formats depend on using information technology to do assessments. One of our speakers showed an example and said 'My goal is that the student's daily learning activity looks exactly like the student's testing activity'. [...] What was great about the session is we saw four or five examples of how different consortiums are dealing with defining the new skills and then figuring out how to use technology to assess those skills. ❞

Dr Charles A. Goldman, Moderator

Speakers

Mr **Steen Lassen**, Senior Adviser, Department of General Upper Secondary Education, Ministry of Education (Denmark)

Dr **Barbara Means**, Director, Center for Technology in Learning, SRI International (USA)

Dr **Martina A. Roth**, Director, Global Education Strategy, Research and Policy - Corporate Affairs Group, INTEL Corporation (Germany)

Mr **Ian Whitman**, Head of the Programme for Co-operation with Non-Member Economies, Directorate for Education, OECD (Paris)

Moderator

Dr **Charles A. Goldman**, Senior Economist, RAND (USA)

Ian Whitman

OECD Assessment Programme

The OECD conducts four types of assessment. Firstly, the Programme for International Student Assessment (PISA) is a three-yearly global assessment looking at how 15-year-olds work in key subject areas, their ideas about learning and how they develop strategies for continuing their education. We also interview schools and parents, study educational systems and identify policy levers. Secondly, the Programme for International Assessment of Adult Competencies (PIAAC) looks at ages 16 upward, covering literacy, numeracy, technology, and generic cognitive, physical, social and learning skills. This is an important tool for assessing a country's human capital.

Thirdly, Assessment of Higher Education Learning Outcomes (AHELO) is still at the feasibility stage. It will be the first international study on learning outcomes and will be valid for different cultures and institutions, aiming at providing a balanced assessment of quality without affecting institutional autonomy. It will cover economics, engineering and generic skills. Fourthly, the Review on Evaluation and Assessment Frameworks for Improving School Outcomes will explore how evaluation and assessment can be used to improve the quality, equity and efficiency of education. Finally, the Teaching and Learning International Survey (TALIS), is a derivative of PISA. The first was held in 2007, covering 24 countries, and the second will be held in 2013, covering lower secondary education. It is intended to provide information on teaching methods and on the impact of teaching on student learning.

Steen Lassen

The Use of ICT and New Media in Examinations in Denmark

In Denmark, the intention is to ensure that exam conditions are the same as those in daily learning, because the same competences are being tested in both cases. New media have been included in the curriculum for some years in the form of a CD-ROM, making assessments more interactive than a paper-based exam. The students find the more visual and non-linear materials more stimulating. Teachers and students respond positively to the introduction of new media, as well as the new possibilities in the student papers. The new assignment has increased the use of ICT and new media in the classroom.

A new pilot project for assessment involving access to the Internet commenced in January 2008. Six thousand students will be engaged on the project this year. The pilot project has been followed by a research team. The team concluded that it had been successful, and recommended that it continue in the same subjects and be extended to others. They found that the competences needed for higher education were strengthened and that it is fair to both weaker and stronger students. It also noted that academic competence in daily lessons had been strengthened, and that the ICT methods were transferred to other subjects.

The intention is to ensure that exam conditions are the same as those in daily learning.

Dr Martina A. Roth

Assessment and Teaching of 21st-Century Skills

This project was initiated by Cisco, Intel and Microsoft after Davos 2009 and involved developing a strategic research framework to help transform the teaching, learning and assessment of skills needed in the 21st century. The six pilot countries were Australia, Singapore, Finland, the UK, the US and Portugal. We have developed five white papers, defining a framework for 21st-century skills, methodologies for assessment, technological issues, learning environments, and a policy framework. The aim is to make it a critical part of formative assessment all over the world.

We want to ensure that our conclusions will also act as guidelines for curriculum change. The research team decided to drive the task

development around three 21st-century skills: collaborative problem solving; ICT and digital literacy; and creativity and innovation. The pilot scheme will test prototypes in diverse classroom environments, ensuring that communication between teachers and students is captured. Following the pilots, we will hold trials to calibrate the psychometric procedures put in place for assessment and teaching.

Dr Barbara Means
Assessing 21st-Century Skills

Instead of bringing assessment into a classroom, we sample the learning activities and the work students do in response. We then score these activities according to the extent to which they encourage 21st-century activities. The advantages are that we do not have to stop learning or to worry about whether an assessment is fair, and we can apply the criteria across subject areas and grade levels. The activities we use as our metric consist of collaboration, knowledge building, ICT use, problem solving and innovation, and self-regulation, and we determine whether they were used to build knowledge rather than just forming part of the task.

Once examples have been collected across the school year, each research partner holds a coding workshop using the same set of international definitions. The main finding is similar to that in the work done in the US on mathematics, language and arts: there is a very close relationship between the coding of the learning activities and student scores, and most of the learning activities score very low in terms of whether they invite the use of 21st-century skills. An exciting aspect of the method is that it can be adapted to professional development very readily.

Instead of bringing assessment into a classroom, we sample the learning activities and the work students do in response.

Questions and Answers

From the floor: There has not been much discussion about the changes that have taken place and, instead, a tendency to assert that 21st-century skills are the same in all countries, which may not be the case. Secondly, online gaming involves challenge, connection and creation. How does that impact Denmark's assessment system? Thirdly, what have you done to ensure that the test reflects necessary life and job skills? Fourthly, what happens to such aspects of life as reflection, spirituality and balance? Finally, have you determined any difference between cultures that reward on an individual, as opposed to a group, basis?

Dr Charles A. Goldman

Dr Martina A. Roth: The most vital thing regarding 21st-century skills is that they must be adapted to local needs. The skills are not limited to academic or business concerns. There is a whole category that includes ethics, philanthropy etc. Regarding collaboration and competitiveness, they are impossible without each other, and they must remain in balance.

Steen Lassen: It is a political decision not to allow group work at exams, and that may change.

Ian Whitman: Our approach is corrected for cultural differences and for socio-economic background. On the issue of cost, poor countries spend the money on this work because it helps them maximise the use of scarce resources.

Dr Barbara Means: There is a lot of agreement that teamwork is an important part of dealing with difficult problems. It is important worldwide, though adapted to local requirements.

From the floor: Mr Lassen, what lessons have you learned from the shift to computer-based learning, and what might you do differently? To what extent

The most vital thing regarding 21st-century skills is that they must be adapted to local needs.

will assessments of 21st-century skills include learners with disabilities? Who is responsible for delivering these skills? Is there any merit to systems where learning and assessment are separate? Are these skills really specific to the 21st century? Aren't they just as fundamental to the 20th century, as they will be to the 22nd century? Is it not true that 21st-century technology also leads students to waste a lot more time online?

Dr Charles Goldman, Moderator: These measurements are just as important in poor countries, but how are we going to enable them to keep up with these advances?

Dr Barbara Means: We need to prepare students to understand the consequences of not doing what they need to do in order to progress. It is part of the maturation process.

Steen Lassen: We do not know the end result when we start the process, so we need to be as open to solutions as possible. Regarding access to external information in an exam, it depends on the tradition and on what you want to test.

Dr Martina A. Roth: The more similar learning environments are, the more natural assessments become. Students will also become more capable of evaluating what is worthwhile. We need to give them the goal and let them figure out how to reach it. As regards the development of skills, it should definitely happen outside school, but education within school has to design curricula to allow greater inclusion.

Ian Whitman: The Programme for International Assessment of Adult Competencies (PIAAC) will also show how one can develop these skills after leaving school. Regarding populations with special needs, computer-based assessment will make it easier for more of these people to take exams.

Dr Charles Goldman: Many of your international studies include lower-income countries. Do we need to do something to allow them greater access to these assessment tools?

Ian Whitman: There is a growing awareness among the stakeholders of the importance of education for development.

There is a growing awareness among the stakeholders of the importance of education for development.

wise

world innovation summit for education

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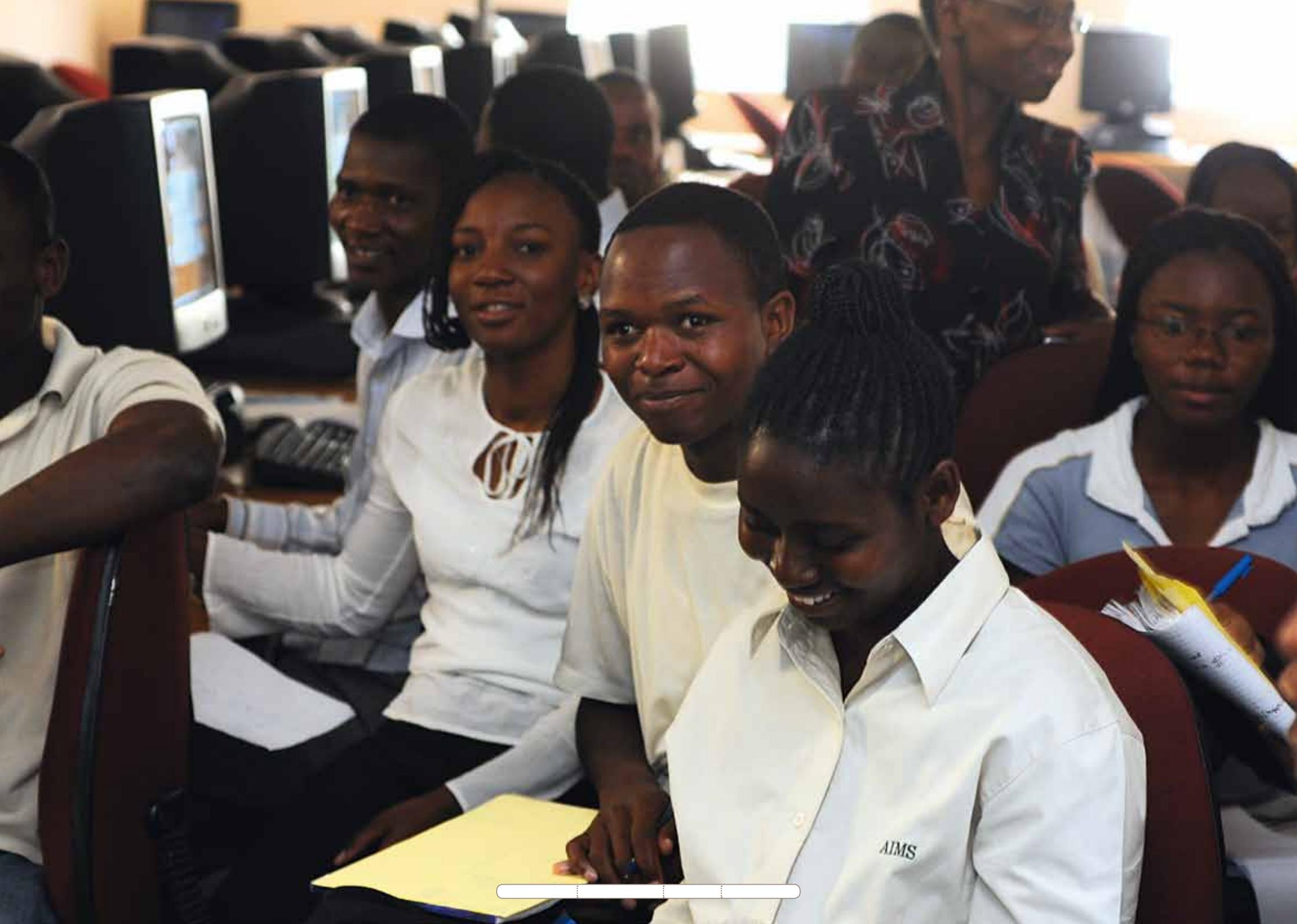
Designing Adaptable Curricula

" This particular session was really about reinventing schools, making education more meaningful for the students and engaging students and their families in the success of that education. It's about student-centred learning, self-paced learning that's technologically supported and active learning environments instead of students sitting in their chairs, obediently listening to the lecture. "

Dr Patti McGill Peterson, Moderator

Speakers

Mrs **Kiran Bir Sethi**, Founder-Director, The Riverside School (India)

Mrs **Vicky Colbert**, Founder and Executive Director, Fundación Escuela Nueva (Colombia)

Dr **Dennis Littky**, Co-Founder and Co-Director, Big Picture Learning (USA)

Moderator

Dr **Patti McGill Peterson**, Senior Associate, Institute for Higher Education Policy (USA)

Dr Dennis Littky

The Big Picture

What really matters is the big picture and not just what goes on in a particular classroom at a particular time, which is why schools must be completely reinvented and we must ask ourselves: "If we did not know there was such a thing as school, what would it be?" We find out what students are interested in and passionate about, consult their families, work out individual learning plans for them and send them to work for people in the community who share their interests. In addition, they come to school for three days a week and are taught in a way that is connected to things that they love. We get students to find their passion and we focus on both job skills and liberal arts' skills. Our attendance rate is much above average, and the dropout rate very low, because children want to come to school. Trying to copy an old model that does not work is not the answer. You have to think about what a country needs and how students can help solve the problems of their country while they are being educated.

If we did not know there was such a thing as school, what would it be?

Vicky Colbert

Case Study: Escuela Nueva

Through Escuela Nueva, my life project of more than 30 years has been to improve the quality of education in developing countries, particularly in Latin America. "Escuela Nueva" means "New School" in Spanish.

Four issues need to be recognised in terms of improving the quality of education in developing countries. Firstly, that it can in fact be done through ensuring relevance by means of a curriculum that is adaptable to the needs of children and communities. Secondly, that innovation at local level can become a national policy. Thirdly, that the conventional teacher-centred model of education is a real constraint and, fourthly, that it is vital to encourage peaceful, democratic behaviour. In Colombia, our local innovation did indeed become national policy, impacting more than 20,000 schools. The method is now used in more than 14 countries, reaching more than 5 million children.

We have worked through child-centred, transformative pedagogy, unlocking 21st-century skills, where the most important thing of all is to work in teams. The teacher becomes a facilitator, there are different learning rhythms in the classroom, and community and cultural practices are incorporated. Children develop leadership skills and democratic behaviour and, rather than traditional textbooks, we use cost-effective, modular learning guides that enable replication of processes, not content, with the children learning through dialogue and interaction.

In Colombia, our local innovation did indeed become national policy, impacting more than 20,000 schools.

Kiran Bir Sethi

Case Study: Riverside School

The Riverside School, which I started 10 years ago, has been working on the design of a curriculum that has got children to move from an approach of "Can I?" to one of "I can".

Choice is vital in life, yet we often deny it to children in their formative years. The focus of The Riverside School is on student wellbeing, which is about the social, emotional, physical and spiritual sides of life. We have concentrated on learning that is embedded in a real-world context, as well as on high-quality adult learning and a strong parent partnership. Our children become informed, responsible and pro-active. We want them to believe that they can bring about the changes that they wish to see in the world and the great thing is that, when they are taught to do good, they also do very well in their academic work. Riverside children have been outperforming the top 10 schools in India in maths, science and English.

Choice is vital in life, yet we often deny it to children in their formative years.

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Questions and Answers

Dr Patti McGill Peterson

Dr Patti McGill Peterson, **Moderator:** What do you see as the major point of resistance to change in schools?

Kiran Bir Sethi: It has been people understanding what needs to be evaluated and what is of value.

Dr Dennis Littky: It has been what people define as learning. It is not just how to do well in a test.

Vicky Colbert: It has been introducing innovation within the system and changing the way the teachers work through participatory learning as actors of change with the children and their families.

Dr Patti McGill Peterson: How can we create the kind of change and new outlook that is required in people guiding education?

Dr Dennis Littky: Rather than focusing on subjects, the new paradigm must be about helping students grow. Then we build from there.

Kiran Bir Sethi: For high-quality student learning, the learning and wellbeing of teachers must be as important as that of students. At Riverside, we provide 50 days of adult learning in the calendar.

Vicky Colbert: In the case of Escuela Nueva, teachers go through the same experiential pedagogics that they use for the children. Also, by getting together each month they have a useful support system.

Dr Dennis Littky: Teachers and students need to plan together.

From the floor: You need to lead children from the concept of common sense to being able to think scientifically. How can you do this and how do they acquire the knowledge they can enjoy using later in life?

Kiran Bir Sethi: Being sensitised does not mean that the children do not develop deep skills.

Dr Dennis Littky: The key phrase here is "rigour, relevance and relationship". This is not just about soft skills. We have to engage them in any way we can and then provide a rigorous education.

Kiran Bir Sethi: When we benchmark with the national standards, the children are outperforming all other schools in the same academic contents.

Vicky Colbert: Our learning template takes children to higher-level thinking and skills with their family and community, and they score high in language and maths. Cooperative learning has to be the basis for this.

Dr Dennis Littky: It has to be about the application of knowledge, not just the knowledge.

Dr Patti McGill Peterson: This is about pedagogy and, to a certain extent, design.

From the floor: How do you motivate teachers to have higher skills and goals, and do assessment systems need to change?

Dr Dennis Littky: Everyone needs to have a purpose, autonomy and the ability to master something.

Kiran Bir Sethi: Instead of deincentivising teachers, we have to make them feel empowered.

Vicky Colbert: Teachers are happy when they see changes in their children, and they are the actors of change. With the modularisation of the curriculum, children will always win and have choices. It is essential to be highly structured and organised.

Dr Dennis Littky: We assess students with their specialist mentors, in student groups, individually and through self evaluation.

From the floor: The universities need to be involved more because reform is very difficult at this level.

From the floor: Firstly, how can you design and manage things at a project-based level when teachers are subject-based? Secondly, how replicable and scalable is The Riverside School? One-off schools will not answer our needs.

Kiran Bir Sethi: We have created templates that allow schools to develop their own curricula and our Design for Change process is also being widely used, involving 250,000 children worldwide.

Dr Dennis Littky: In terms of working at the project-based level, the key is to find work that has meaning.

Vicky Colbert: The key is to modularise and ensure that what you are doing is scalable and politically, financially and technically feasible. As regards universities, in Latin America, there needs to be research in education and universities need to be linked to schools.

The learning and wellbeing of teachers must be as important as that of students.

It has to be about the application of knowledge, not just the knowledge.

The key is to modularise and ensure that what you are doing is scalable and politically, financially and technically feasible.

Dr Dennis Littky: High schools do what they are supposed to do to get their students into the universities, but the world is changing and students will need different learning. Additionally, school principals are trained at college at night, which is not how leaders should be trained.

Kiran Bir Sethi: In design, a lot of process is built on rapid prototyping, which education does not do enough of. Radical collaboration with people outside the educational community is another area where much more needs to be done.

From the floor: Firstly, do headmasters and even ministers of education need to be transformed? secondly, how can we involve the holders of traditional knowledge? Thirdly, I am a student. How can you motivate children who have problems with drugs or have to start working at a very young age?

Vicky Colbert: Helping the leaders understand what is going on in education is key and you need to be able to show results. We introduce the local culture into schools through our learning corners.

Dr Dennis Littky: To develop policy, you have to go from practice to policy. Where students have a hard life at home, education is about giving children hope and respect.

Vicky Colbert: For children with difficulties, we adapted the model for children displaced by armed conflict. They have a warm learning environment and more personalised attention.

Dr Dennis Littky: I send my low-income students overseas to be with people poorer than them. They come back thinking differently.

Kiran Bir Sethi: You have to tackle hunger first.

Human Capacity Development

"*We have approximately 60 million educators on the globe at the moment. We need to find 10 million more over future years in order to give every child a fighting chance, specially in primary education, and then later on in secondary education.*"

Mike Gibbons, Moderator

Speakers

Dr **Frannie Léautier,** Executive Secretary, African Capacity Building Foundation (Zimbabwe)

Dr **Tarek Shawki**, Director, Regional Bureau for Sciences for the Arab States, UNESCO (Egypt)

Mr **Fred van Leeuwen**, Secretary General, Education International (Belgium)

Moderator:

Mr **Mike Gibbons**, CEO, Richard Rose Federation (UK)

Dr Frannie Léautier

Capacity Development in the Education System in Africa

The majority of less developed countries are in Africa. There has been impressive economic growth, but incomes have not increased. These countries have had trouble meeting the MDGs with regard to health, education and literacy. There are also new vulnerabilities and, to face them, the education sector will need to function at an optimal level. Africa is the only region of the world which is still growing in population terms and that requires both management of demographic transitions and policies to allow people to avail themselves of opportunities. Therefore, the capacity to transcend single-sector thinking is critical. These countries also face problems such as chronic poverty, climate change and the balance between economic and political competition.

Education is the foundation of strategic thinking and development initiatives in most countries.

Education is the foundation of strategic thinking and development initiatives in most countries. The capacity to formulate policy combines research and implementation capacities, and this is a complex process requiring change management skills. There is also the capacity to support tracking and follow-through of these policies. Education provides the background for research and innovation, not only in generating ideas but also in testing and sharing them. African universities have had to face several challenges: the disengagement of states from social educational provisions and the growing divide between the ability to scale up and the ability to manage change. Therefore, universities are compelled to seek a balance between new and old while striving to develop capacity. Key challenges for the way forward include the development of leaders and mentoring balanced with local participation and the reclamation by universities of their role as leaders in research and innovation.

The Foundation is committed to education through partnerships with policy institutes, think tanks and universities, seeking synergies between training, research and policy.

Dr Tarek Shawki

The Work of UNESCO

The OECD indicates that there is an increasing demand for complex thinking over routine cognitive skills. UNESCO has identified networking infrastructure, Information and Communication Technology (ICT) skills for teachers, and contextualised multilingual e-content as three major areas in which member states need help. Regarding ICT, we have learned a great deal in trying to meet demand from states. These skills involve basic computer literacy. Egypt, Jordan and Syria made the International Computer Driver's License (ICDL) mandatory for students in higher education and K-1 to K-12 teachers. Our main tasks are quality assurance for this scheme, customisation and localisation of content, and compiling a master database of all ICDL students. However, we also focus on the issue of teacher training.

Egypt, Jordan and Syria made the International Computer Driver's License (ICDL) mandatory for students in higher education and K-1 to K-12 teachers.

There was no agreement on what ICDL skills were needed globally for teachers and no framework for updating them in keeping with technology, so we set out to build a common core skill matrix, a common set of universal qualifications, and to introduce pedagogy and collaboration. UNESCO brought the stakeholders together and published the first phase in January 2008, consisting of a complete policy framework and a competency framework matrix that identifies the skills and syllabi. We agreed on 15 skill groups as the core skill groups required by teachers. Educators and governments would then choose which skill sets to prioritise.

Fred van Leeuwen

Prioritising Teachers

Innovation is worthwhile not for its own sake but only when it improves education, and it will not work in practice unless education professionals believe in and support it. Furthermore, the most successful enterprises understand that people are key to their success and pay a lot of attention to their human resources policies. Qualified teachers

are the key to quality education. They must have a good knowledge base and also know how to teach and to develop the potential of each student as an active citizen. They must be lifelong learners and both their initial and in-service training must be at the head of the educational agenda.

There are signs of de-professionalisation, with teachers being sidelined in decisions on education policy and practice. Teaching has become precarious in many OECD countries where there has been a strong trend toward short-term contracts. The situation has become far more serious in developing countries where a teaching position sometimes does not generate sufficient income: 70% of our membership lives below the poverty line. There are 60 million teachers in the world and, according to UNESCO, we will need over 10 million more in the next five years. However, de-professionalising teaching will widen the gap between those who enjoy quality teaching and those who do not. Education International has started a programme in a number of African countries to try to ensure that unqualified volunteer teachers gain qualification within a reasonable period of time.

There are 60 million teachers in the world and, according to UNESCO, we will need over 10 million more in the next five years.

Questions and Answers

Mike Gibbons

Mike Gibbons, Moderator: Is there anything you would like to challenge or comment on further?

Fred van Leeuwen: The ending of state funding for education is a very worrying development.

Dr Frannie Léautier: The trend of cutting funding to tertiary education began in the 1980s and it was only realised later that it undermined the entire chain. Has UNESCO put any thought into the skills needed to deal with other problems such as disease or climate change?

Dr Tarek Shawki: The model of building templates or blueprints has worked very well in this area and we are trying to adapt it to other areas.

From the floor: The serious issue of the brain drain from Africa was not mentioned: there is a proposal to create 1,000 university chairs in Africa, but only the G20 can provide the funding. How could we help learners to evaluate teachers in a practical way? How can we have sustainable education when we do not have sustainable resources?

Dr Frannie Léautier: We have found that when you educate people in their home country, they stay there. One model for sustainable funding would be to see what the diaspora could do in terms of teaching and the remittances people send back to their home country.

Fred van Leeuwen: There are examples of agencies not only draining qualified teachers from the South but also exploiting them. The Commonwealth Secretariat has adopted a protocol to find ways to compensate countries suffering teacher emigration.

Dr Tarek Shawki: It is important for students to evaluate teachers because they are often more aware of some aspects of new technology. Regarding sustainability, universities are no longer the sole owners of education.

The ending of state funding for education is a very worrying development.

It is important for students to evaluate teachers because they are often more aware of some aspects of new technology.

From the floor: Are there any initiatives that deal with local content? Secondly, most education planners have difficulties using information, so you need to build their capacity. It is a mistake to focus solutions around universities. Thirdly, Africa is the richest continent of all, so policymakers should look at supporting education through their own natural resources. Furthermore, NGOs and civil society should support educators.

Dr Frannie Léautier: All the programmes we support start with someone already in the work environment, and the learners bring practical problems to the universities where the examples are used in teaching. Only 30% of our resources go to capacity development, the remaining 70% going to capacity building in health, agriculture or trade. Regarding natural resources, transforming agriculture will be the most important contribution Africa can make, and this involves joining modern science with traditional methods.

Dr Tarek Shawki: Regarding local content, we are building a free global e-library of courseware in conjunction with our other programmes.

From the floor: What is the role of mass communication in this issue? We need teachers who can inspire rather than teach. How can we ensure that international organisations contribute to the development of education in a sustainable manner?

Fred van Leeuwen: Regarding inspiring teachers, there is a great shortage of them and it is necessary to invest in quality teacher training.

Dr Tarek Shawki: Teachers need to obtain the new skills or lose their jobs because the new job description involves sharing information, not dispensing it. Regarding advocacy, we have to use the media a lot more to convey the new skills and critical thinking that are required.

Dr Frannie Léautier: Regarding sustainability, we need to bring costs down so as to expand access, create revenues through economic growth and think differently about education, because people learn as they go.

Mike Gibbons: Frannie said that we need to develop human capacity to deliver us from the problems of the past and to deliver the systems of the future, and that is our task.

We need to develop human capacity to deliver us from the problems of the past and to deliver the systems of the future.

Learners' Voice

WISE 2010 invited 20 learners from around the world to participate in the Summit as full delegates. The energy, enthusiasm and fresh perspectives on learning that they contributed were greatly appreciated by participants, many of whom said that learners should always attend future WISE Summits, and in growing numbers. Their presence and full involvement were much discussed on Twitter, as these tweets show:

....

Learners' Voice session starting. The future on the stage in front of us, looking good!

....

Some of the best speakers of the conference at Learners' Voice - impressive!

....

It's been an engaging time at #wise2010. Good to see the policy makers willing to listen to the Learners' Voice. Thanks all.

....

Moving session from the youth voice Learners' group at #wise2010… They proved that youth needs to be part of the change today, not tomorrow.

....

The Learners' Voice students have taught us lots - informal, inventive, inciteful.

....

Learners' Voice was a great addition this year. They should get involved with social entrepreneurs as well as policy issues from now on.

....

In the course of the Summit, they conducted lively video interviews with speakers and attendees, asking probing questions about many aspects of education and sometimes challenging conventional wisdom. The students also posted their thoughts on sessions to the Learners' Voice blog which was open throughout the Summit:

Blog address: **www.learnersvoice.tumblr.com**
The blog can also be accessed through the WISE website:
www.wise-qatar.org

In Summit sessions, they spoke with confidence and insight from the floor and one learner, Abdalla Abdalla, a student at Texas A&M University at Qatar, participated as a speaker in the Breakout Session on Social Media: Trends in Collaborative Learning. To confront the view that social media are merely a distraction from education, he gave real-life examples of how students and professors are using social media. Illustrating his point in a surprising and totally convincing fashion, he revealed that he had crowd-sourced his presentation through Facebook and Twitter.

In a Spotlight Session at the end of the conference, the elected representatives of the group spoke about their expectations prior to the Summit, their experiences at WISE and their aspirations for the future of the initiative and global education. The session was very well-attended and, coming immediately before the Closing Plenary Session, was an inspiring moment in the conference that not only gave them the opportunity to address the attendees collectively but also provided a hopeful vision for WISE at the centre of global education.

Quotes from the Learners' Voice Blog

"We are fully aware of our potential to be tomorrow's decision makers, since we are already training to lead students and peers towards positive change. We are young change-makers who are not afraid of challenging stakeholders and influential people. We are enterprising and outspoken enough to make our voices heard, representing students worldwide."

Chiara Palieri, Italy

"The WISE Learners' Voice programme participants come from every continent and many varied educational systems. Still, the educational challenges and solutions we voiced rang true with nearly every member. The educational justice Heeyoung hopes for in South Korea and Indee hopes for in Qatar is not vastly different from what I hope for in the United States, or for what each of the young learners in a small, rural, Appalachian town are hoping to experience."

Kaylen Mallard, USA

"Although we have different backgrounds and activities, I think all of us are trying to improve education in our own way, in our own environments. And I think we learned a lot at the WISE Summit. We made good contacts and at the right time, when we will have enough decision-making power, we will try to take good decisions for education."

Adriana Garboan, Romania

Day 2

Funding Education

" The key message from the Plenary on Funding was that 'business as usual' simply won't work when we're talking about raising money for education. [...] Overall, the Funding Plenary Session started out with a rather gloomy outlook in terms of the financial global situation, but actually came forward with some very interesting, positive ideas. "

Mike Baker, Moderator

Speakers

Mrs **Irina Bokova**, Director-General, UNESCO (Paris)

Mr **Mushtaq Chhapra**, Chairman and Founding Director, The Citizens Foundation (Pakistan) (WISE Awards Laureate 2010)

Dr **Scott Cowen**, President, Tulane University (USA)

Mr **Steen Jorgensen**, Sector Director, Human Development, MENA Region, The World Bank (Washington, D.C.)

Moderator

Mr **Mike Baker**, education journalist, broadcaster and author (UK)

Irina Bokova

Funding Issues in Education

Five years from the Education for All deadline, progress has been made, but much remains to be done. There are 69 million children out of primary school and the same number outside secondary school; fewer than 40% of countries provide girls and boys with equal access to education. Disparities have increased in Africa at the secondary level over the last 10 years: in sub-Saharan Africa, almost 12 million girls may never enrol in school, and there are nearly 800 million illiterate adults, nearly two-thirds of whom are women. The demand for education is rising at the same time, driven by demographics, economic needs and government priorities.

Aid disbursements to basic education have stagnated for the first time since 2008, at $4.7 billion (US), and aid to sub-Saharan Africa declined. UNESCO's 2010 report on education states that even if developing countries maximise their resources, there will still be a gap of $16 billion (US) in low-income countries. Aid disbursements to basic education in countries that rely on significant external funding have declined by 4%. Education provides the tools to respond to change and to make the most of it, and it is a common denominator for reaching all eight MDGs. Our first imperative is to urge countries to invest in education: Armenia, Egypt, Ethiopia, Brazil and Nicaragua are doing this. Governments must create stimulating learning environments, incentivising quality teaching, reaching out to the vulnerable and adapting curricula and pedagogies to a changing world.

There was an average gap of 9% between commitments and disbursements in Africa between 2002 and 2008, and the Education Fast Track initiative is severely underfunded. The share of overseas development for education is 12%, as against 17% for the health sector. Governments may review the overall allocation of funds, or earmark taxes on the private sector, but they must reduce inefficiencies and develop a culture of results. However, new sources of financing must be found. Options are new donor countries, public-private partnerships, levies on currency transactions, education bonds in local currencies, venture funds, or debt-for-education swaps.

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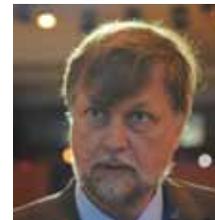
Steen Jorgensen

Innovation in Fundraising

The main funder of education is and should be government, but as there are important cross-border benefits to education, there should also be cross-border funding resources and thus a regional agenda: hence the adoption of the Doha Declaration and the generous contributions to the Education for All – Fast Track Initiative. Since there is a market for carbon credits, there could also be one for education credits. An alternative model would be US municipal bonds. We could issue a global educational bond which is exempt from tax, enabling the cost of funding to be lowered. UNITAID benefits from taxes on airline tickets to the tune of over $700 million (US). The International Financing Facility for Immunization raises funds on capital markets which are then used to pay for vaccines. RED is a voluntary consumer contribution scheme whereby consumers and retailers contribute a percentage of the purchase price to the fight against AIDS.

While it is important to leverage at the level of the global private sector, more could also be done at national level, such as adjustment of policies to allow more private investment. Secondly, a lot of past educational reforms have relied on engineering approaches, and this has worked quite well in terms of access. However, the focus has shifted to quality and efficiency, and the way forward entails incentives and accountability, requiring innovative mechanisms for disbursing funding. There also needs to be direct funding for students and parents, such as in the form of vouchers or conditional transfers. We have seen that even parents in poor countries are willing to contribute funding if they can control it and hold the school accountable. We need to learn from our colleagues in the health and environmental sectors in raising funding globally and spending it locally.

We could issue a global educational bond which is exempt from tax, enabling the cost of funding to be lowered.

Mushtaq Chhapra
The Citizens Foundation

TCF has managed to achieve 50% female enrolment. The focus on female student enrolment is made possible by a 100% female faculty. The funding model was primarily based on contributions from Pakistanis living in the country and those in the diaspora. Participation is at a high level, and the volunteer programme has been a great success in creating awareness. Ten dollars (US) allows education to be provided to one child for a month, including books and uniform. One school can be run for $15,000 (US) a year, and can be built for $150,000 (US), so it would take a comparatively moderate effort to alleviate educational deprivation worldwide.

The funding model was primarily based on contributions from Pakistanis living in the country and those in the diaspora.

Dr Scott Cowen
The New K-12 Model

The future of higher education in the US and worldwide depends primarily on the effectiveness of K-12 education, because the higher education system can be no better than the system that feeds it. Educational failures do not result from a lack of desire or vision, but are caused by the inability to convert thought into action effectively. An investment in education can yield outstanding returns and is the primary driver to building sustainable and vibrant communities. Firstly, a more educated population generates additional earnings, leading to increased economic development, and reduces unemployment rates.

Secondly, how funding is used is as important in affecting student outcomes as the amount of funding, and US federal funding of elementary and secondary education is a small fraction of the total cost. These issues are primarily the responsibility of individual states and local school districts. Thirdly, there needs to be a focus only on funding the policies and practices that increase student achievement. The key principles for rebuilding the New Orleans K-12 system after Hurricane

A more educated population generates additional earnings, leading to increased economic development, and reduces unemployment rates.

Katrina were setting superior standards and expectations, empowering schools and holding them accountable, fostering competition among schools, aligning resources and practices that enhance achievement, investing in high-quality human capital, and engaging parents to support student success. New Orleans now has a greater percentage of charter schools than any other state.

Finally, transformation requires hard work, commitment, and courage to make difficult decisions. There must always be a clear strategy and effective funding allocation, and we must rigorously monitor results.

Questions and Answers

Mike Baker, Moderator: Why are we not ensuring that businesses are making a bigger contribution?

Irina Bokova: There needs to be a strong commitment to making education work, and there is increasing momentum towards realising that funding at all levels is needed.

Mike Baker

Steen Jorgensen: These funding methods are already happening in other sectors, and there is increasing commitment to the importance of education. It is possible to design a more equitable voucher system.

Mushtaq Chhapra: Fundraising has become very specialised. We have had a very good experience with corporate donations. The larger the donor base the better.

Dr Scott Cowen: There is a role for more competition in funding, but how we use funding is crucial. There is a misalignment between the needs of corporations and those of education.

From the floor: Mrs Bokova, would it be possible to publish reports on which states fail to meet their requirements? Do you think teaching equity and sustainability at all educational levels could help improve funding? How long will it take to resolve the problem of illiteracy? Fourthly, your aid model is both outdated and patronising.

There is a role for more competition in funding, but how we use funding is crucial.

Irina Bokova: We do publish statistics and indicators, but we cannot force countries to meet them. Secondly, education in ethics and sustainability is attracting increasing interest. Thirdly, we are making a huge effort to promote literacy through informal means. Fourthly, capacity building for Africa is crucial and local sources of financing do exist, but some countries do need aid.

From the floor: What kind of encouragement can the public sector give to the private sector to invest in education?

Dr Scott Cowen: We need to demonstrate the value of education as an investment.

From the floor: How can we send a strong message that poor education is a security threat?

Mushtaq Chhapra: You are right that most Third World countries have abdicated their responsibilities, and civil society must send a strong message to them, while also creating working models.

Mike Baker: I want one concrete action point from each of you.

Dr Scott Cowen: Get the highest value from the money you have, to demonstrate that it is a good investment.

Mushtaq Chhapra: There must be good governance and optimisation of funding.

Steen Jorgensen: We need to optimise our financial expertise to raise funding. The most exciting model is human capital credit.

Irina Bokova: We need to remember that education is a primary responsibility of government. One funding model will not fit all situations.

Most Third World countries have abdicated their responsibilities, and civil society must send a strong message to them.

We need to optimise our financial expertise to raise funding. The most exciting model is human capital credit.

Skills for the 21st Century

"We had a very interesting discussion on the skills needed for individuals and society and in the end we found out that the skills have to be developed interdependently. This means each skill you have – for example social competence or critical reflective competence – depends on the other one and if you move forward one competence you need to develop the other one too. This is the first aspect of interdependency. The second one is, if you develop skills of one group of actors in the field of education, you have to develop, at the same time, the skills of the other group too. "

Prof. Ekkehard Nuissl von Rein, Moderator

Speakers

Dr **Katerine Bielaczyc**, Deputy Head and Associate Professor, Learning Sciences Lab., National Institute of Education (Singapore)

Mr **Ahlin Byll-Cataria**, Executive Secretary, Association for the Development of Education in Africa, and member of the governing board, UNESCO Institute for Lifelong Learning (UIL) (Tunisia)

Prof. **Khalil S. Hindi**, President, Birzeit University (Palestine)

Mr **Marc Prensky**, writer and consultant in education and learning, author of *Teaching Digital Natives: Partnering for Real Learning* (USA)

Moderator

Prof. **Ekkehard Nuissl von Rein**, Director, German Institute for Adult Education/ Leibniz Center for Lifelong Learning (Germany)

Prof. Khalil Hindi
Skills Needed for Today's World

We need to place emphasis on developing skills in foreign languages, above all English, "cosmopolitanism" or the ability to move within and between cultures, the reconciliation of individuals' multiple identities, and respect for the complex identities of others. We should celebrate diversity, try to understand people better and make common cause with them.

In terms of higher education, there needs to be efficient information processing, both mentally and technologically, self-motivated, lifelong learning and an emphasis on technological literacy. The purpose of developing these skills is to enable students to enjoy life. For this, we also need to develop students' artistic and aesthetic sensibilities, since these too are skills for the 21st century and beyond.

We should celebrate diversity, try to understand people better and make common cause with them.

Ahlin Byll-Cataria
Promoting Critical Knowledge, Skills and Qualifications for Sustainable Development in Africa

The Association for the Development of Education in Africa (ADEA) is a policy dialogue forum composed of 53 ministries of education in Africa and 19 development agencies and foundations. It capitalises on innovative experiences in Africa and elsewhere. We are preparing a conference in Burkina Faso on promoting critical knowledge, skills and qualifications for sustainable development in Africa. This concerns all development sectors and many different stakeholders.

Africa is a continent of one billion people, with 40% of the world population under the age of 15 and 28% of global arable land. To make the most of this huge potential for discovery and development of natural resources, the four pillars of sustainable development need to be taken into account: protection and preservation of the environment;

sustainable economic growth based on a rational exploitation of natural resources; a skilled labour force; and inclusive societies fighting marginalisation and exclusion. Education and training must promote common skills for life, work and continued learning, relevant technical and vocational skills, and scientific and technological skills. We need problem solving and lifelong learning, results-based systems, multi-sectoral strategic approaches and participatory, multistakeholder partnerships.

Education and training must promote common skills for life, work and continued learning

Dr Katerine Bielaczyc
Education as a Process of Enculturation

In the 21st century, the psychology of learning views education by transmission of knowledge to individual learners as flawed. Instead, education is seen as a process of enculturation. Learning comes from the company that we keep and is also dependent on tools and social practices. Children learn through immersion and a "community of learners" approach to learning and teaching that embraces the diversity of participants.

Rather than developing a set of skills, the aim should be for people to become adaptive creators of knowledge, with students and teachers working as communities that build knowledge together. One model is an international educational movement called Knowledge Building Communities. Software exists for this particular model, allowing students to enter their ideas into a knowledge base, encouraging new approaches to education and assessment and creating a culture and community. Parents are also involved and we tap into the international community.

The aim should be for people to become adaptive creators of knowledge.

Marc Prensky
Living in the Future

Politicians and educational reformers still look to the past. We live in an era of accelerating change and we need to help our kids live in the future. We have to change how and what we teach and students must be involved in developing this change.

Teachers and students must become partners, and teachers also need to become a tool that is fit for the 21st century. It is no longer a case of "I tell. You take notes." Although children can increasingly teach themselves with the resources available, they still need guidance from the teacher as coach, guide and partner. What is really important in teaching is empathy and the ability to relate to children. Technology supports the partnering pedagogy, though the tools change all the time.

Additionally, we need to reduce the curriculum, which is overfull. We need to teach behaviours and skills that will be useful throughout students' lives. The new emphasis should be on character and passion, communication, problem solving, creation and skills. We also need to teach our students programming so that they can make a machine do what they want it to do.

Questions and Answers

Prof. Ekkehard Nuissl von Rein, Moderator: What concrete steps are needed to develop intercultural understanding?

Marc Prensky: Students must be connected to things that are real.

Dr Katerine Bielaczyc: Students must be able to use their skills in their everyday activities.

Prof. Nuissl von Rein

Prof. Ekkehard Nuissl von Rein: Will people be able to learn and apply all the skills that are needed?

Khalil Hindi: All the skills that I talked about are interrelated and will be mutually enhancing. They can be learned through experiential learning – experiencing and practising things through exposure to cases, dilemmas, texts and so on.

Prof. Ekkehard Nuissl von Rein: What is the absolute priority for Africa?

Ahlin Byll-Cataria: Rather than identify an absolute priority, we need to take a holistic approach.
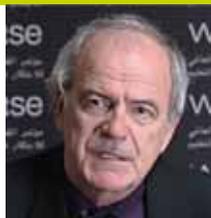
From the floor: Firstly, how can we keep up with the rapid change of technology? Secondly, how can someone in Palestine think about the future in these new ways? Thirdly, what do people think about the value of a socio-constructivist curriculum? Fourthly, what has been the impact of Marc Prensky's approaches to education?

Marc Prensky: When you grow up with rapid change, it is not as frightening. In terms of practical applications, just asking young people what their passion is makes a huge difference.

Prof. Khalil Hindi: This is not an easy task for Palestine, but the fact that it is being tackled with vigour, imagination and creativity, and solidarity from the rest of the world also helps.

Dr Katerine Bielaczyc: There are not a lot of opportunities for evidence to be collected and there needs to be an intercultural understanding between policymakers, researchers, children and teachers.

From the floor: Firstly, it is important that there is evidence-based research to help formulate policies. Secondly, how can students acquire the skills to recognise that there are multiple identities? Thirdly, how do we reconcile these new ideas with the need to prepare for exams and the job market? Fourthly, how can we develop 21st-century skills in teachers? Lastly, is making teaching more human the most important thing?

Prof. Khalil Hindi: In situations such as Palestine, the reinforcement of national identity is likely to take precedence.

Ahlin Byll-Cataria: Development must mean human development, with education as its foundation.

Dr Katerine Bielaczyc: Recognising commonality in the diversity of perspectives is the key.

Marc Prensky: In terms of the pressures on students, the key issue is whether education can be done through a bottom-up approach as well as top-down. I believe that people now see that education is about partnership and a consensus is also emerging on what we should teach.

From the floor: Firstly, we need to convince children that they can work without teachers. Secondly, how can we teach young people to survive in the real world? Thirdly, we need to respect teachers and ensure that students can adapt to their educational environment and that the curriculum meets society's needs. Fourthly, there is a large-scale teacher education programme going on so how is the paradigm going to shift?

Marc Prensky: Nothing matters if you do not change what happens in the classroom. On the technology question, many young people come into companies now being able to do terrific things, especially with technology, and we have to learn to utilise that or they will get incredibly frustrated.

Dr Katerine Bielaczyc: When people see kids engaged in learning, or teachers teaching in a new way, they want the same for their own schools.

Ahlin Byll-Cataria: How do we make these learning opportunities available and useful for the learners? How do we do that together, with the different stakeholders of education in Africa and with our partners from outside Africa?

Prof. Ekkehard Nuissl von Rein: Can you give one word on what has to be done?

Prof. Khalil Hindi: Back to fundamentals, but do it in a totally different way, in an experiential way.

Dr Katerine Bielaczyc: Community.

Marc Prensky: Our real task is to balance top-down and bottom-up, with mutual respect.

> When people see kids engaged in learning, or teachers teaching in a new way, they want the same for their own schools.

Open Education Models

We are at the end of the beginning. We have had 10 to 15 years of the development of freely available educational resources that have been used by thousands, if not millions, of teachers and students around the world. This is an important innovation in an approach to education that we haven't seen before and, as such, it challenges the way we think about providing educational services, the delivery of education itself and in new and fundamental ways.

Michael Trucano, Moderator

Speakers

Ms **Cecilia d'Oliveira**, Executive Director, MIT OpenCourseWare (OCW) (USA)

Prof. **Asha Singh Kanwar**, Vice President, Commonwealth of Learning (Vancouver)

Prof. **V. N. Rajasekharan Pillai**, Vice Chancellor, Indira Gandhi National Open University (IGNOU) (India)

Moderator

Mr **Michael Trucano**, Senior ICT and Education Policy Specialist, The World Bank (Washington, D.C.)

Prof. Asha Singh Kanwar

Three Generations of Open Education: Future Implications

Open and distance education, by division of labour, specialisation and economies of scale, has allowed the triangle of access, quality and cost to be reconfigured. Asia alone has over 70 open universities and the number continues to grow. Open education refers to policies and practices that allow entry to learning with no minimum barriers regarding age, gender or time. The second generation of open education was shaped by the use of the Internet: the first online course was launched in 1984 and the use of web-based programmes allowed learners to study either on campus or at a distance. Interactivity and personalisation were key to this second-generation approach.

The third generation came into being at the turn of the century with the Open Education Resource (OER) movement, based on the idea that education was a public good and that technology would help in its sharing and use. Many developing countries are investing in OER, including India, China, Vietnam and African nations, with the expectation that time and money can be saved, capacity building can be encouraged and the quality of education can be raised at all levels. The Commonwealth of Learning's Virtual University for Small States of the Commonwealth (VUSSC) is a consortium of 32 small states which have come together to develop online capacity and offer the courses through existing tertiary institutions. What makes this programme particularly important is its focus, not just on collaborative content development, but on capacity building and the creation of communities of practice. OER has the potential to open access, improve quality and reduce costs at all levels.

Cecilia d'Oliveira

The Role of OER

OER has produced an abundance of resources, but these go beyond content to software for manipulating remote lab equipment, for example, and platforms for developing and sharing content. MIT OpenCourseWare (OCW) provides free and open access to over 2,000 MIT courses, and other institutions have followed suit with over 13,000 courses. Some of these institutions provide optional fee-based registration and interactive components. There are many other OER models which have developed beyond the OCW model. Connexions and Curriki are online platforms that provide tools enabling educators to develop and share materials. Their goal is to foster global communities and they offer access to the thousands of teaching and learning resources developed on their platforms. Carnegie Mellon offers a dozen open courses with integrated assessment, feedback and intelligent tutoring.

Khan Academy provides 1,600 short educational videos targeted at younger users and NPTel is a government-sponsored collaboration among institutes of higher education which offers video courses designed to be adapted and used by others. About 70 million people have used the MIT content since its launch and about a million use it per month. Research indicates that 10% of these are educators, 42% are students and 43% are independent learners. The primary use of OCW material is for personal knowledge development. However, institutions and educational systems have not really taken advantage of these resources.

Prof. V. N. Rajasekharan Pillai

Open Education and Certification Models in India

An OER consortium similar to OCW is being proposed by the National Knowledge Commission to develop a sustainable strategy for the effective use of OER in the Indian context. The Indira Gandhi National Open University initiated an electronic knowledge repository in October 2006 and has emerged as one of the world's largest. About 40,000 self-instruction modules and about 1,600 videos are currently available and there are more than 90,000 registered users. The facilities

of this online repository were extended to offer open courses with the option of certification in 2009 and over 700 courses in various disciplines are currently available.

The platform allows prospective learners to sample a course before enrolling and helps them in choosing courses of study. This model provides a flexible framework for the 21 different schools of study in the university to combine different courses and also offers tailor-made programmes. One thousand five hundred additional universities are to be created in India, yet higher education opportunities are only being provided to 12% of the relevant age groups. It will be necessary to look at different models of providing education and skills, combining conventional methods with information and communication technologies, looking at content as well as capacity building, and all available methods of collaboration and technological intervention.

Questions and Answers

Michael Trucano

Michael Trucano, Moderator: How do you measure the success of open education initiatives?

Prof. Asha Singh Kanwar: The success of OER is that it has drawn our attention to transforming education worldwide. Institutions in Vietnam and Malaysia have developed educational resources from free OER content.

Cecilia d'Oliveira: Beyond making content available and ensuring access to it, one challenge is to determine how people are using it.

Prof. V. N. Rajasekharan Pillai: The initial fear was that making content freely available would reduce the number of learners, but the opposite happened. Access alone is not enough. Success has to be measured and we have developed very effective student satisfaction surveys.

Michael Trucano: What is your view of the sustainability of the OER movement?

Prof. V. N. Rajasekharan Pillai: We have created a centre for corporate education, training and consultancy through the OER model and we are confident of continued support.

Cecilia d'Oliveira: MIT has received significant funding from the Hewlett and Mellon Foundations in expanding the project, and that is not sustainable. One of the major priorities has been to develop a sustainability plan for our core operations.

Prof. Asha Singh Kanwar: It is not just about funding, though that is important. It is about the material and the people who use it. We need to ensure that the project benefits the stakeholders as well.

Cecilia d'Oliveira: We need to ensure that people contributing material, as well as institutions, see benefits from this.

From the floor: How would combining a system of open assessment with OCW impact on the latter? How do we ensure that graduates of distance education courses are treated on equal terms as formal education graduates? Who is not accessing these materials?

Prof. Asha Singh Kanwar: Regarding acceptance, there are a few providers who do not offer quality services and products. It will take time to change the

The success of OER is that it has drawn our attention to transforming education worldwide.

mindset. There have to be different business models for revenue generation when it comes to assessment.

Prof. V. N. Rajasekharan Pillai: Distance-learning programmes are viewed differently in the case of some courses and institutions.

Cecilia d'Oliveira: Regarding access, there are examples of social entrepreneurs who have helped OCW. The numbers reflect web access, so do not reflect the full situation in terms of Africa.

From the floor: Do you agree that open coursework is also necessary for secondary education? Is there a global trend in terms of traditional universities also offering distance programmes? Is there a central repository listing all the courses available, from the point of view of helping access? How do you make open education graduates attractive to employers?

Cecilia d'Oliveira: There have been rudimentary efforts to centralise courseware, but they do not provide the kind of discovery tool we need.

Prof. V. N. Rajasekharan Pillai: Universities are training larger numbers of primary and secondary school teachers; 70% of the total content is provided through printed materials and 10% through multimedia. Distance education has been happening in conventional universities for decades, because a hybrid model is necessary in a country like India.

Prof. Asha Singh Kanwar: Regarding relevance, we can create innovative learning pathways in order to make learning relevant to what the student needs. Regarding secondary schools, five African countries along with Trinidad and Tobago are developing a curriculum for secondary schools, in a project funded by Hewlett. Our organisation is introducing secondary education using distance learning and free content.

Cecilia d'Oliveira: There are some good OER initiatives in the US which have developed material specifically for secondary education.

Michael Trucano: Can you summarise our discussion in one sentence?

Cecilia d'Oliveira: The next 10 years will deal with how to turn content into more of a quality educational experience.

Prof. V. N. Rajasekharan Pillai: One major issue is how information and communication technology and open information resources can enhance the quality of teaching at all levels.

Prof. Asha Singh Kanwar: The next phase of the OER project is moving from the development of materials to their use. We will need concrete evidence of success stories.

One major issue is how information and communication technology and open information resources can enhance the quality of teaching at all levels.

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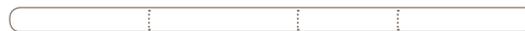
Multistakeholder Partnerships in Education

" It doesn't really matter about institutions. It's not about organisation, assets or funds. A partnership is created when people really trust each other, so with the government, private sector, civil society and educational institutions, in order to innovate into education, they need to trust each other. "

Salvatore Nigro, Moderator

Speakers

Mr **Kenneth Cohen**, Chairman, ExxonMobil Foundation, and Vice-President, Public and Government Affairs, ExxonMobil Corporation (USA)

Mr **Jacob Kragh**, President, LEGO Education (Denmark)

Dr **Sylvie Lainé**, General Managing Director, Fondation Nationale Entreprise et Performance (France)

Prof. **Clifford Nii Boi Tagoe**, former Vice-Chancellor, University of Ghana (Ghana)

Moderator

Mr **Salvatore Nigro**, Chief Executive Officer Europe, Education for Employment Foundation (Spain)

Kenneth Cohen
Meeting Demands for a Highly Educated Workforce

Social challenges such as improving education need to be seen and addressed in a global context and this places a premium on collaborative action by governments, industry and NGOs. However, governments have to be the cornerstone of such partnerships. Doors to basic education are opening for more people, but sometimes not wide enough to meet the demands of the 21st-century economy. Nations wanting to remain competitive will need workers with strong backgrounds in science and technology. Companies, foundations and NGOs can help complement the work of governments in preparing the next generation.

Companies look for partners with a strong reputation in their field and good standing in their community, as well as clear accountability. The National Math and Science Initiative (NMSI) and the Middle East North Africa Scholars Program (MENA Scholars Program) are two of our programmes, focusing on science and maths because they are the core competencies we look for. The first NMSI initiative has spread to 22 universities, and we expect 7,000 additional maths and science teachers by 2018. The second initiative increased enrolment in advanced classes by 70% and achieved a pass rate of 98% in the first year. MENA Scholars Program offers students from 14 countries the opportunity to earn a Master's in geosciences and related fields in US universities. More than 1,100 applications have been received to date and it supports students from a variety of nations. ExxonMobil and industry also support Qatar Foundation's education initiatives.

Jacob Kragh
The Experience of LEGO Education in Partnerships

One of our initiatives is a learning tool in which students build and programme robots so as to reinforce their understanding of mathematics and physics. We are working with many different partners to bring this about, including other commercial entities, universities and NGOs. For example, we develop curricular material for science and mathematics in collaboration with universities such as Carnegie Mellon. Furthermore, we believe we can gain better and more rapid innovation through partnerships, one example being our work with the Massachusetts Institute of Technology (MIT) on creating a playful environment for children aged 8-13. Another example is the development of classroom software in collaboration with Tufts University.

FIRST is a non-profit organisation working to promote interest in science and technology through extracurricular activities and, in partnership with them, we have reached over 50 countries. Finally, we can also leverage partnerships to give us more credibility as an educational organisation. The criteria we use for partnerships are shared beliefs about learning, creating value for all, and a shared set of values.

Dr Sylvie Lainé
Partnership Methodology and Outcomes

The approach of the Fondation Nationale Entreprise et Performance (FNEP) is agreement on common stakes and openness to cultural differences, and its goal is to contribute to the development of the French economy. Every year it selects 10 executives to work as a team on global and local issues in order to produce specific recommendations. Three key lessons have been learned over the last 40 years. Firstly, mixing different backgrounds, profiles, educations and sectors means that you can produce powerful ideas relevant to both private and public sectors. Secondly, this method can inject practical research into major global topics, such as diversity, public-private partnerships, and emotional resources within organisations. Thirdly, offering an experience of personal development can help leaders to adapt to a changing world.

Both private and public organisations share a belief in close cooperation and shared responsibility, but this is not easy to achieve in everyday activities. Therefore, FNEP identifies three steps for managing the

Doors to basic education are opening for more people, but sometimes not wide enough to meet the demands of the 21st-century economy.

The criteria we use for partnerships are shared beliefs about learning, creating value for all, and a shared set of values.

Private and public sectors have to develop collective performance through a culture of partnership, and this is done by trial and error.

process: prior choice of major research subjects; commitment on the part of all partners and integration of HR policies; and shared resources to facilitate the personal and professional development of the group. Building good long-term partnerships requires building personal relationships between the partners. Therefore, private and public sectors have to develop collective performance through a culture of partnership, and this is done by trial and error.
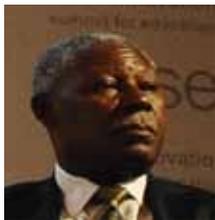
Prof. Clifford Nii Boi Tagoe
Partnerships in Sub-Saharan Africa

Higher education in Africa has been neglected as a result of intervention by the World Bank and the International Monetary Fund (IMF), resulting in migration and the deterioration of facilities. However, the situation has changed in recent years with the acceptance of the relationship between higher education and socioeconomic development. Two major recent developments are the emergence of private institutions and increasing scope for partnerships, most of which have been funder-initiated. There have been a variety of successful partnerships over the last 10 years, some of them looking at policy and quality assurance and therefore involving governments and government agencies.

A lot is also happening in the Information and Communication Technology (ICT) sector. Limited infrastructural capacity is being addressed through the establishment of consortia and education networks, such as the Partnership for Higher Education in Africa (PHEA) and the Bandwidth Consortium (BWC). The impact of these has been a saving of $19.7 million (US) in bandwidth costs in three years. Regarding national research and education networks, the major example is the UbuntuNet Alliance. Teacher Education in Sub-Saharan Africa (TESSA) has produced open-access resources for teacher education, and these are widely used in Africa. Three hundred students have graduated from the African Institute of Mathematical Sciences (AIMS) and many are already teaching at higher education institutions. This is funded by many different partners.

Two major recent developments are the emergence of private institutions and increasing scope for partnerships, most of which have been funder-initiated.

Salvatore Nigro, Moderator: How do you ensure you are selecting the right partners?

Kenneth Cohen: It starts with a transparent understanding of the objective. The partner must have a proven track record and strict accountability.

Salvatore Nigro

Salvatore Nigro: What are the challenges when entering into a partnership?

Jacob Kragh: You need to do your homework on the objectives and not over-emphasise the financial aspect.

Salvatore Nigro: How important is the human factor?

Dr Sylvie Lainé: The assets are sometimes easier to share than the human factor because even after agreement on programmes you need to work together. The human factor might be most important on a day-to-day basis.

Salvatore Nigro: Which partnership was really innovative and why?

Prof. Clifford Nii Boi Tagoe: The teacher education programme stands out because it is one of the greatest challenges faced by African education.

From the floor: Mr Kragh, what are the disadvantages of your system, and what partnerships do you have with developing countries? Mr Cohen, what are your views on oil companies training local expertise? Given the scarcity of natural resources, why is ExxonMobil only stressing the funding of science and technology instead of the creative arts and humanities?

Jacob Kragh: It is not always easy to align the objectives of a commercial organisation with those of a non-profit organisation. Regarding developing countries, the US educational sector is better structured in terms of commercial partnerships, but we are also engaging in the Middle East, Asia and Europe.

Kenneth Cohen: Our goal is to ensure our workforce and supply chain mirrors our location, and we have worked to employ and train local personnel. Secondly, global demand for energy is a function of world population and development, and the challenge is to supply this energy in a way that lowers the environmental impact.

It is not always easy to align the objectives of a commercial organisation with those of a non-profit organisation.

Dr Sylvie Lainé: We believe that analysing and solving a problem requires people with various backgrounds and types of training. For example, this year we are looking at regulation in Europe. We selected 10 people for this research and they are still working at the moment. About half of them come from engineering and one or two from literature or history.

From the floor: What is the future for young people interested in pursuing courses in education and how can they be supported? How do you benchmark the achievements in the various programmes and how do you share the lessons that are learned? Mr Kragh, how do you bring your tools in line with curricula?

Kenneth Cohen: Given where our business is, in both the developed and the developing world, our focus is on education in science, technology, engineering and maths, education for women and girls, and health.

Prof. Clifford Nii Boi Tagoe: One of the challenges is monitoring and evaluation and, though case studies are presented in various forums, we are not doing enough in terms of rigorous evaluation.

Jacob Kragh: We try to involve teachers in the competitions and that tends to help link back to the science curricula. There is growing awareness among parents of their role in increasing the interest of their children in these subjects by becoming involved.

From the floor: Mr Cohen, would it not also be possible to award PhD scholarships in all fields? Prof. Tagoe, have you considered innovative ways in which partnerships could serve as the basis for building up individual universities? Who are the main initiators behind the partnerships you have formed?

Kenneth Cohen: The majority of graduate-level scholarships we award go to geosciences and petroleum engineering because our first goal is to have a healthy business which mirrors the population of where we are located.

Prof. Clifford Nii Boi Tagoe: Funding will always be important but we should be looking at our strengths at local level and engaging in networking in order to share resources.

Dr Sylvie Lainé: Our strength is to ensure all decisions are shared between public and private sectors. It is an equal partnership.

Jacob Kragh: Regarding initiatives, we might approach partners with a new idea but, on the other hand, a European university has also approached us.

Salvatore Nigro: What is different for you since you walked into the room?

Prof. Clifford Nii Boi Tagoe: I am being asked to be more of an initiator.

Dr Sylvie Lainé: People must come first.

Jacob Kragh: We must supplement our traditional focus with the arts.

Kenneth Cohen: Partnerships must involve interplay between government, industry and NGOs.

> **Our strength is to ensure all decisions are shared between public and private sectors. It is an equal partnership.**

Creating Teachers for Tomorrow

" We focussed, not unnaturally, on teacher training and teacher professional development for the 21st century and the fundamental theme was the impact that the new technology can have on this development and on the improvement of teaching and learning across the world and within countries. We looked particularly at how the new social networks, the potential of Twitter, Facebook, YouTube and a myriad of other different applications allow teachers to talk to each other because we were driven very much by the concept that real improvement amongst teachers is not going to be top-down but peer-to-peer and based on collaboration with teachers – teachers talking to each other, within a school, within a country and now, of course, globally. "

Andrew Bethell, Moderator

Speakers

Prof. **Stephen Heppell**, Founder, heppell.net, and Professor, Bournemouth University, Chair in New Media Environments (UK)

Mr **Tim Rylands**, innovative educator (UK)

Moderator

Mr **Andrew Bethell**, Vice-Chair and Director of External Affairs, Teachers TV (UK)

Andrew Bethell

Opening Remarks

While new technologies will be a key driver in the improvement and creation of teachers for tomorrow, we need to address 21st-century professional development as well. Teachers are at the heart of educational improvement, but we have to ask whom we need to reach if we want to deliver effective systems change. The Bell Curve produced by Professor Rogers applies equally to the willingness of teachers and educators to take on new ideas and, if you are to change an education system, you need to reach the middle group of those who have established firm habits as teachers.

We need scalable and cost-effective solutions. According to the second McKinsey report, there is little to support a one-size-fits-all approach and collaborative practice is the main mechanism for improving teaching practice and making teachers accountable to each other.

If you are to change an education system, you need to reach the middle group of those who have established firm habits as teachers.

Prof. Stephen Heppell

Tomorrow's Children

A lot of new educational approaches are appearing: for example, the repurposing of existing buildings as schools, the involvement of parents in creating schools, and the teaching of super-classes of 90 to 120 children with multiple teachers. Things are happening to the old factory schools: they are happening everywhere, and they are happening cheaply. We know that playfulness is a key part of this and that technology has transformed so many opportunities that lie around us.

We also know that teacher education has been very slow in responding to this. Indeed, we have a crisis. Third-millennium learning is collaborative and immersive, but current teacher education is neither. We are looking for ingenuity, for collaboration in project-based learning, and for a curriculum which is full of the unexpected and surprising, because the world is full of the unexpected and surprising. These things are far from the current teacher curriculum.

We are at a really interesting point. We know that technology can connect teachers in their preparation and development, and programmes like Talking Heads have enabled this connectivity, aiding professional development. We need this interconnectivity, this sharing of ideas, and schools are embracing the tried-and-tested ingredients which the world has to offer. Parents must also be prepared to be better teachers. There is absolutely nothing wrong with teachers. We are building the most exciting and seductive learning the world has ever seen and somehow we need to include our teachers in that.

We are building the most exciting and seductive learning the world has ever seen and somehow we need to include our teachers in that.

Tim Rylands

Technology and Education

Teachers now have the opportunity to interact and share good ideas across the world. This is facilitated by technologies such as Twitter and TeachMeet. The idea is that we are valuing technology. The university model of a teacher is often that of a lecturer giving out words of wisdom to be taken down. It is not surprising that learning can be stagnant when this model goes out into the world and teachers deliver knowledge in this way. Teachers are under a lot of pressure, whether at authority, country, class or inspection level, and that can have a negative physical and mental impact, as well as worsening standards.

We need to work with teachers on different ways to get children to take off in their learning and one of the ways to do this is through modelling good teaching, whether by analogue or digital means. We need to break down barriers to learning in any way possible and, whatever we use, it must be based on having an impact in the classroom. Getting children involved in the process has to go beyond enjoying the experience. Blogging is one way to get children to write about their experiences. It is a way to break down the walls and share ideas globally. It can also work well for teachers. Teachers are using tools like Wallwisher and

PrimaryPad as a way of sharing ideas between themselves and students. Tagxedo and Tag Galaxy offer the potential to create nonlinear lessons in a collaborative manner.

However, this process must help children rise to a challenge. Sometimes we might panic and think creativity does not achieve results, but in fact it helps teachers and children reach and even exceed their targets. Some of the best learning happens when we share ideas. We have to be brave enough to put ourselves in the position of being a learner.

We have to be brave enough to put ourselves in the position of being a learner.

Andrew Bethell

From the floor: How can we enable young learners to evaluate teachers in a practical and critical way?

Prof. Stephen Heppell: We use children in the appointment of staff and in observing lessons in the UK. They have been trained to do it. The children conduct inspections in some cases instead of Ofsted [Office for Standards in Education, Children's Services and Skills], and teachers support this because of what they learn from it. Children are wise about learning but only when you give them the structures.

Tim Rylands: Learning based on affinity and practical experience is sometimes where you can get feedback.

From the floor: How will it be possible to extend such creative approaches to universities?

Prof. Stephen Heppell: No university should be allowed near teacher education if they are not running an outstanding model school. Also, there is no reason why the first and second year of university teaching should not happen in some of the best schools.

From the floor: How far can this innovation be guided by research? What would the curriculum for training future teachers look like? What advice would you give on how to scale the new image of education?

Prof. Stephen Heppell: We suffer from too much expertise and not enough experience in teacher education. We need both. Teaching in places that do not look like classrooms can prepare you for the unknown.

Tim Rylands: One of the best ways for a child to learn is for the teacher to model – writing, getting stuck and asking the child for ideas. When the child gets stuck, he or she will have different ideas. It is a shared learning journey. Regarding universities, you need modelling as well as training. A lot of advice for teachers cannot be written down. You need to watch it happen.

We suffer from too much expertise and not enough experience in teacher education. We need both.

From the floor: Any training model starts with a curriculum.

Tim Rylands: You cannot achieve successful teaching unless you know what is happening. You have to be aware of everything that is happening in the classroom.

Prof. Stephen Heppell: Scale is crucial and the question is how you achieve it. You can never achieve it from the top down. It has to be done virally. We do not harness our children to make learning better. Older children helping younger children works well, but we do not do it. However, there are innovative projects that give children autonomy and they perform astonishingly well.

From the floor: What would be your new word for a "teacher"?

Tim Rylands: This is at the root of everything we do. The word "teacher" is too one-sided, but I cannot think of an alternative. When I teach I sometimes ask questions even though I know the answer.

Prof. Stephen Heppell: The word should be "teacher". It is the most important profession in this economy. We made the mistake of telling teachers what to do. We need to establish professionalism.

From the floor: The term "facilitator" is better than "teacher". What is the role of the teacher as we move forward? The future will be more concerned with the capacities of the human mind and the environment we live in. Should we hope that change should happen from the bottom up or do we need a different type of strategic influence on policymakers?

Tim Rylands: The McKinsey report, despite its shortcomings, moved policymakers away from changing school structure to a focus on teaching and learning. The way we should sell initiatives is in terms of cost-effectiveness.

Prof. Stephen Heppell: The McKinsey report is poor and lacks ambition. Ministers would like to say they have spent money and things are different but that has not happened, partly because we have failed to provide evidence of why different is better. We need to articulate how good children might be with new learning.

Tim Rylands: We need to focus on quality, and through whatever method has an impact.

From the floor: The use of ICT should be humanised, because there are a lot of ill effects. You cannot isolate learning from its other effects.

Tim Rylands: I do not believe that modern technology damages communication, but we need to build in human interaction where possible.

Prof. Stephen Heppell: Personalisation has not penetrated sufficiently into technology. There is no one-size-fits-all solution.

Andrew Bethell, Moderator: Technology is a key tool for improving teachers, but a wider issue concerns the processes whereby we educate both new and existing teachers so that they can create the circumstances in which this new learning can take place.

I do not believe that modern technology damages communication, but we need to build in human interaction where possible.
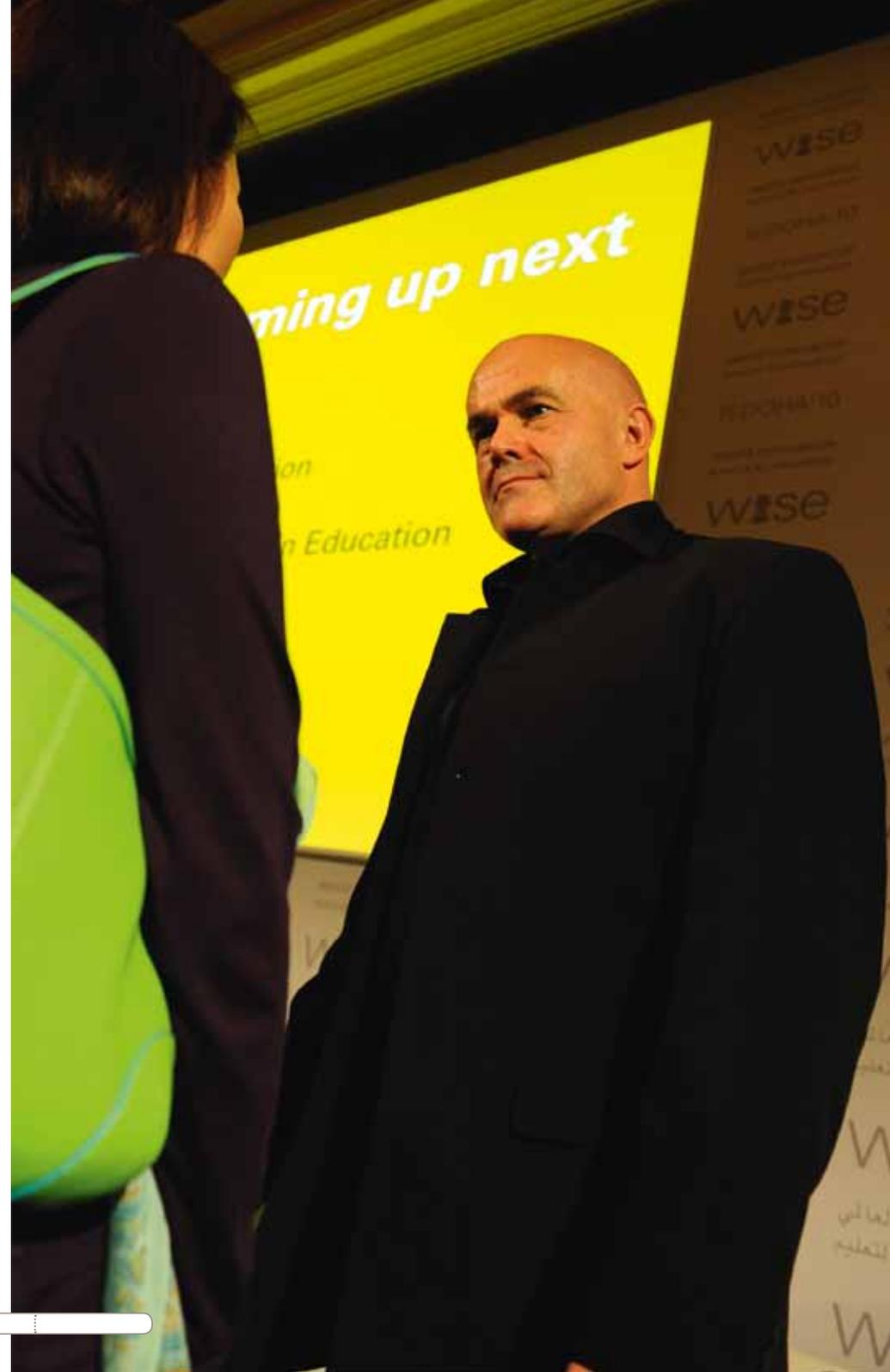
Monitoring and Evaluating the Use of New Technologies

This Workshop was designed to be highly interactive, and brought together participants to reflect on the monitoring and evaluation of the use of new technologies in education. Why is it that so few good examples of monitoring and evaluation exist, given the importance that most practitioners attribute to them? How can we ensure that more effective monitoring and evaluation are implemented, so that we can improve the use of such technologies in education? These were the two essential questions that participants grappled with.

Working in roundtable groups, participants began by discussing why there is so little effective monitoring and evaluation of ICT in education. Key reasons for the lack of good monitoring, which was considered as the ongoing review of implementation, included: the lack of a culture that is open to monitoring and sees it as something positive; the costs of monitoring; the lack of mutually agreed metrics; the rapid change in the technology itself; lack of capacity to undertake effective monitoring; and the suggestion that although people speak about the importance of monitoring, there may not actually be an expectation that it will be done. Similar reasons were identified for the lack of good quality

Convenors

Tom Cassidy, Education Impact Fellow, formerly Director of the International Education Group (IEG) at the Harvard Graduate School of Education and the Harvard Institute for International Development

Tim Unwin, Education Impact Fellow, Professor of Geography and UNESCO Chair in ICT4D, Royal Holloway, University of London

Monitoring Recommendations

- Providing incentives for monitoring, such as project expansion or future funding
- Reducing fear of monitoring, by building a culture that understands its importance for enhancing performance
- Using partnership and peer monitoring to reinforce mutuality of support
- Fostering creativity by looking at unintended impacts, including the end-user's goal perceptions and asking "What else?"
- Establishing policy and planning for monitoring at the onset of a project
- Setting clear milestones and benchmarks
- Establishing international standards on the use of monitoring ICT in education
- Piloting monitoring templates
- Focussing on effective training so that all involved understand its value

Evaluation Recommendations

- Building human capital and capacity for evaluation
- Ensuring that those who fund initiatives absolutely require appropriate evaluation
- Ensuring that reliable baseline surveys are undertaken so that evaluation can assess the impact of the initiative
- Allocating appropriate levels of funding at the beginning for evaluation.
- Developing robust and effective techniques for evaluation
- Establishing, through WISE, a percentage for how much is needed for evaluation
- Awarding good evaluation, through WISE, as an incentive
- Educating people on the value of evaluation as a mechanism for learning
- Clearly articulating project objectives
- Investigating, innovating and exploring new methods of evaluation
- Increasing the amount of advocacy and publicity devoted to the importance of evaluation

end-of-project evaluation, but these also included: fear of evaluation; the difficulties of doing it effectively; the fact that often little is actually done with the evaluation reports to improve educational delivery; and a lack of incentives for people to participate therein.

Having identified the reasons why there is insufficient monitoring and evaluation, Workshop participants turned their attention to their recommendations as to how this situation can be reversed. The following recommendations are seen as being critical in achieving this:

➡

The Exhibit Area

The Exhibit Area, a new feature at WISE 2010, proved popular with attendees, not only because it highlighted different facets of the global WISE initiative, community and projects in engaging ways, but also as a convenient place to catch up with old friends, make new ones, network, relax and enjoy lunch or coffee. When Plenary and Breakout Sessions were not under way, it was constantly abuzz with activity and conversation. The area was organised into four zones – CONNECT, SHARE, INSPIRE and ACHIEVE – representing different, but interlinked, aspirations of WISE, and opened out onto a convivial terrace.

The CONNECT zone presented the WISE initiative's latest developments and included a Qatar Foundation corner, a World Digital Library kiosk and a WISE Partners' corner, all attended by friendly staff, eager to discuss their institution's work in education. There was also a focus on the Ministerial Colloquium on Quality of Education in the Arab World, organised in partnership with the Arab League Educational, Cultural and Scientific Organisation (ALECSO) and the World Bank, which took place in Doha in September 2010. Another presentation concerned the newly created WISE Education Leadership Programme which, in 2010, offered 12 university presidents from developing countries a customised programme in higher education leadership and management.

The SHARE zone brought to life the highly collaborative spirit of the WISE community – a place to share insights and ideas, with candour and enthusiasm. It highlighted the forthcoming WISE collaborative Internet platform, an interactive hub for the WISE community, and included a "Learners' Voice" workspace. Thanks to this exciting and much-acclaimed new feature of WISE, 20 students from different countries attended the conference as full delegates with a mission to provide learner perspectives in Summit sessions. This was a first step for learners to play an active role in the growing WISE community (see page 56).

The INSPIRE zone presented a wide spectrum of points of view on the future of education, inspiring attendees to tackle educational challenges and think creatively and "out of the box". It screened stimulating video interviews with visionary education experts and eminent thinkers and decision-makers and incorporated a demo stage for live Spotlight Sessions, where WISE participants shared their insights and experiences – notably, our remarkable WISE Awards 2010 winners. (For a list of 2010 Spotlight Sessions, see page 148).

Lastly, the ACHIEVE zone was dedicated to concrete educational accomplishments, in line with the firmly action-oriented philisophy of WISE and its strong focus on on-the-ground projects. Here the WISE Awards initiative was presented, with special features on the 2009 winners and the 2010 Awards, including opportunities for participants to meet the 2010 winners and find out about their pioneering ventures. Here, there was a corner devoted to the exciting and unique partnership between Euronews and WISE to produce *Learning World*, a series of documentaries about wide-ranging educational projects and ideas from around the world. *Learning World* programmes can be viewed on the WISE website (www.wise-qatar.org).

All in all, the Exhibit Area was an appealing new feature of WISE 2010 that was both informative and hospitable, contributing to the easy flow of discussion and debate among education stakeholders from around the globe.
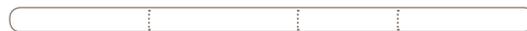
Appraising the Impact of ICT

"*Yes, it is possible to make huge differences with ICTs but we need to think about ICTs in the very broadest sense. Radio, in some areas, is really important. How can we use ICTs to support the millions of untrained teachers across the world? Can we use mobile gaming to make a difference to the learning experiences of young people? These are just a short sample of lots of things that were discussed.*"

Prof. Tim Unwin, Moderator

Speakers

Dr **Se-Yeoung Chun**, President, Korean Education and Research Information Service (KERIS) (Republic of Korea)

Dr **Kentaro Toyama**, Senior Researcher, School of Information, University of California, Berkeley (USA)

Prof. **Daniel A. Wagner**, Professor of Education, and Director, National Center for Adult Literacy (NCAL), International Literacy Institute (ILI) and Literacy.org, Graduate School of Education, University of Pennsylvania (USA)

Moderator

Prof. **Tim Unwin**, UNESCO Chair in ITC4D, Professor of Geography, Royal Holloway, University of London (UK)

Dr Se-Yeoung Chun
ICT in Korea

Korea is a world leader in the use of ICT in education. KERIS has played a pivotal role in developing this over the 10 years of its existence in collaboration with government, local authorities and the private sector. Among the services it provides is a web-based home learning system, digital textbooks and online teacher training. It also runs pilot schools and projects with government support.

Technical difficulties and resource shortages have been the main reasons advanced against ICT usage. Teachers are also still reluctant to use ICT. However, the correlation between access to ICT and advantages for learning has been demonstrated, along with its impact on problem-solving ability and proficiency in scientific subjects. Regarding the future of ICT, it has the potential to extend the educational community locally and globally and integrate school environments and resources into society as a whole.

The Korean experience has been that ICT connects people and helps them acquire life skills more quickly, providing a real basis for building the future of education.

Regarding the future of ICT, it has the potential to extend the educational community locally and globally and integrate school environments and resources into society as a whole.

Dr Kentaro Toyama
The Disadvantages of Technology in Education

Technology is not always a good thing in education. It requires a lot of money and effort to ensure it works well. The maintenance costs can often be greater than the individual hardware and software investment by a factor of ten. Technology can also act as a distraction from the fundamental purpose of education, whether for students or teachers, and it can also amplify socio-economic differences. Using computers as a substitute for teachers generally results in worse outcomes than teachers working on their own, and they do not appear to be cost-effective in terms of supplementing teachers.

There are examples of very effective educational systems with limited or constrained use of technology, one being Finland. You do not need a large amount of technology in the classroom to develop a workforce for the 21st century. This is no different from previous generations, who were well prepared to deal with the technological requirements of modern society. Introducing technology into schools that already do well in delivering education often allows those schools to teach what they would not otherwise be able to, but no amount of technology will rectify a broken school system.

There are examples of very effective educational systems with limited or constrained use of technology.

Prof. Daniel A. Wagner
The Role of Outcomes

ICTs are global and growing, but the digital divide not only exists between countries but particularly within countries. ICT outcomes which are measured in terms of connectivity can increase inequities. Among the people being excluded are illiterate individuals, dropouts, ethnic and linguistic minorities. Sensitivity to the diversity of content and learning competencies in order to increase equity can have an impact, but this has not happened, in part because the outcome models are very complex. For example, one project measures relevant local content, participation and motivation, while another, carried out by the OECD, measures social connectedness, but we cannot necessarily tell whether the trends are positive or negative. Outcome measures do and should drive inputs, and paying attention to the outputs will probably change the inputs.

ICTs are growing irrespective of cost, but much of the funding goes to the wrong places due to easy-to-use outcome choices, such as the number of computers per capita. There should be a better alignment between investment and learning content rather than a focus on hardware or access. ICTs can reduce poverty, therefore, but only when the inputs are biased towards the disadvantaged.

Among the people being excluded are illiterate individuals, dropouts, ethnic and linguistic minorities.

Questions and Answers

Prof. Tim Unwin, Moderator: What advice would you give with regard to measuring the impact of ICT on education?

Prof. Tim Unwin

Dr Kentaro Toyama: Firstly, you need to ensure that the school system is capable of absorbing it, and secondly, you need to show that ICT makes a contribution. It is important to keep track of the cost, but impact can be measured separately.

Dr Se-Yeoung Chun: It is important to measure the extent of barrier-free communication between students, and contact between students irrespective of racial or income barriers.

Prof. Daniel A. Wagner: We need to look at diversity in the population sample, and to remember that the human/ICT interface can be effective with disadvantaged populations.

From the floor: Should we not be talking about social and cultural capital, as well as cultural and societal expectations? Dr Toyama, why are outcomes still being discussed at international conferences, and for how many more years will we need to do so? How do we sustain literacy and numeracy with the introduction of ICT?

Dr Se-Yeoung Chun: Regarding social and cultural capital, the ability to communicate and share information without barriers is very important. The challenge is that the problems remain the same regardless of learning method. Finally, we may need to go beyond traditional concepts of literacy where ICT is concerned.

Dr Kentaro Toyama: We will probably be discussing outcomes forever. There are no shortcuts in education, but there is always a search for them, and there is a tendency to reward novelty in educational policy.

Prof. Daniel A. Wagner: We are moving towards tailoring materials to individual groups and needs because, while national curricula are not a panacea, ICT can provide local content in people's mother tongues.

> It is important to measure the extent of barrier-free communication between students, and contact between students irrespective of racial or income barriers.

Dr Kentaro Toyama: The idea that simply buying children "One Laptop Per Child" will work is fundamentally flawed. Good school structures can make good use of technology.

From the floor: Are we using the right methods to assess the impact of ICT? Do you agree that the next generations of technology will reduce the costs and the barriers to helping good teachers deliver good learning? Would it not be more effective to train teachers who are also managers rather than spreading the knowledge indifferently?

Prof. Daniel A. Wagner: Our methodology is improving along with the technology, and there needs to be more investment in understanding the impact of ICT.

Dr Kentaro Toyama: Technology amplifies the pedagogical capacity of a school system. It is badly implemented because the capacity to use it fully is not there.

Dr Se-Yeoung Chun: Technological literacy is fundamentally different from the conventional definition.

From the floor: Are we running the risk of creating a generation of technology consumers without creating producers, and how does that impact our assessment? How would you address the enormous problem of the lack of teacher training without using technology? Do you think cognitive science is a good source of knowledge?

Prof. Daniel A. Wagner: A lot of the systemic problems revolve around teacher training, and technology can make a difference there. Regarding cognitive science, we tend to use it in a rudimentary way in studying outcomes, but whether we are paying attention to what the broader field of cognitive science is doing is another story. We are at the beginning of this enterprise of "appraising the impact of ICT". In five years we will have some of the answers.

Dr Kentaro Toyama: The motion picture, radio, landlines, TV etc. have all been seen as the antidote to bad education in developed and developing countries, and they have all failed to deliver, because education needs good guidance throughout. Regarding teacher training, a lot of technologies do not immediately deliver the required impact, even when scaled, unless supported by good institutions.

Dr Se-Yeoung Chun: It is the same thing with ICT as with every other technology. It starts off as being very difficult to learn, but then people grow up with it.

> A lot of the systemic problems revolve around teacher training, and technology can make a difference there.

Social Entrepreneurship in Education

"Social entrepreneurs are people who are motivated by passion, a fire in their gut, to fill the gap in education that governments fail to address. They work in close partnership with communities, often using technology, trying to meet local needs rather than award certificates or credits or formal educational credentials."

Brian Stecher, Moderator

Speakers

Mr **Rodrigo Baggio**, Founder and Executive Director, Center for Digital Inclusion (Brazil)

Mr **Charles Leadbeater**, Innovation expert and author of *Learning from the Extremes* (UK)

Mr **Bunker Roy**, Founder-Director, Barefoot College, Social Work and Research Centre (India)

Moderator

Mr **Brian Stecher**, Acting Director, RAND Education (USA)

Rodrigo Baggio
Center for Digital Inclusion (CDI)

The CDI is a community-based organisation and its community centres are self-managed. The community centre approach is based on three key pillars: education, services and micro-enterprise, and the principle of using technology to transform the lives of young people. CDI started 15 years ago and now has 820 community centres in 20 Brazilian states and 13 countries, most of them in Latin America but also including the UK and Jordan. We also work with juvenile prisons and it is amazing to see how technology can be used to change people's lives. One example was a prisoner who became one of our coordinators and started a CDI centre in his own community when he was released. This ex-prisoner has created 197 micro-enterprises with other former prisoners.

The Asháninka have been using the Internet as one of their weapons in the war against Peruvian drug dealers, emailing the president and the military to request help, and they were able to drive them out in this way. The most important aspect of the CDI's work is the way in which technology has been able to change people's lives. The assertion of the right to use technology, however, can also change society by creating freedom and solidarity.

It is amazing to see how technology can be used to change people's lives.

Charles Leadbeater
Learning from the Extremes

The vantage point from which you choose to address a problem will determine much of the solution, and if you seek a model of what education might become, you look at Finland. The problem is that Finland is homogenous, cohesive and highly developed, so the answers you get might not be relevant to the needs you face. Therefore, you should start from need, not from the best possible model. Social entrepreneurs are very good at recognising and articulating need, campaigning about it, and mobilising and using resources. The biggest need is created by the fact that we are creating six mega-cities of 12 million people a year over the next 30 years, almost all in the developing world.

There are two kinds of innovation: sustaining and disruptive. There are two ways in which people innovate: formally and informally. The best way of sustaining formal innovation is by improving existing school systems, but since this is not enough, social entrepreneurs also reinvent schools. They create ways for people to learn with and by one another. One of the main weaknesses of education is that school is only one influence on how children learn, and social entrepreneurs create new ways to link schools to communities. They create new ways to learn new things, and motivate people to learn rather than forcing them.

Education gives people hope, but it needs reformation. The danger is that it becomes self-referential, bearing little relation to the outside world. One of the biggest challenges for policy makers is to create new ways for people to learn.

Social entrepreneurs are very good at recognising and articulating need, campaigning about it, and mobilising and using resources.

Bunker Roy
The Barefoot College

This example of a Barefoot College was built in 1986, and believes only in traditional knowledge and skills. It cost $1.5 (US) per square foot and 150 people stay there. It is the only college that is run entirely on solar energy. We set out to demystify technology and bring it to those who matter the most, and we came up with the idea that we should train women. We have trained women all over India, and have electrified 600 villages with solar energy. Extending this scheme to Mauritania in West Africa, we decided not only to train women, but to train grandmothers to be solar engineers, electrifying over 600 houses so far.

Four communities, over 50 km from the nearest electric grid, agreed to take full responsibility for electrification in 2008, and agreed to

send four women, mothers and grandmothers, to India for training for six months. The four women established workshops and started the electrification programme, transforming the four villages. The decentralised Barefoot approach has reached 27 countries in Africa and has trained 140 grandmothers. Through a unique collaboration with the Indian government, the travel and training costs for grandmothers from any part of the world will be paid for. We are now in 30 countries worldwide.

There are indigenous solutions available everywhere, and we just need the capacity and competence to demonstrate this. The amount spent on the entire programme was $3 million (US).

There are indigenous solutions available everywhere, and we just need the capacity and competence to demonstrate this.

Questions and Answers

Brian Stecher, Moderator: What prompted you to break with the traditional role you prepared for and to take this on?

Rodrigo Baggio: Technology was my first passion, and my second was voluntary and social work. I had a dream and decided to devote my life to making it come true.

Brian Stecher

Bunker Roy: The system seems to take your courage away. Social entrepreneurs are way ahead of their time, and have to carry people with them.

Charles Leadbeater: It is a mixture of being social and being driven.

From the floor: Mr Roy, you used your establishment roots to get to the government. Do you recommend that to other people? What philosophies should we teach people?

Rodrigo Baggio: We need to talk about love, in terms of love of ourselves, of our families and friends, and in terms of empathy.

Bunker Roy: It is not "know-how" but "know-who". Anything is possible if you know the right people in the right place at the right time. You need to be able to show that an idea is beneficial to government.

From the floor: Can you elaborate more on who should be doing these things? Can you upscale this model of empowerment?

Bunker Roy: We completely underestimate the capacity of people to pick up sophisticated knowledge. The problem is in our heads.

Charles Leadbeater: The really interesting models are where small organisations can have a big impact, so it is the principle which can be scaled rather than the organisation. Systems of the future will work with you and sustain relationships, and they will be a mix of the new and the traditional.

Rodrigo Baggio: The most powerful thing about social entrepreneurship is not direct impact but the power of inspiration.

Brian Stecher: What would you say to government ministers to facilitate the spread of such movements?

Rodrigo Baggio: Social entrepreneurs already have amazing solutions, and partnerships with the private sector and government could help scale them up.

Charles Leadbeater: Education in the developing world will depend on an alliance between states, civil society and social entrepreneurs.

Bunker Roy: People will have to put pressure on their governments from below to adopt alternative solutions.

From the floor: Mr Roy, what is the role of young intellectuals in this process? How do you change our education systems so that they start producing such entrepreneurship?

Bunker Roy: The problem is to change the mindset of young people, and to change villages so that people do not leave them for the city.

Charles Leadbeater: There is an upsurge of interest in civil society campaigns and disillusionment with politics among young people. Education does not have a monopoly on learning now.

Bunker Roy: There are thousands of experts whose knowledge is highly accepted and respected, but they are ignored because they do not have degrees.

Rodrigo Baggio: Our educators are former drug dealers or kidnappers, they are blind or disabled. Yet they have come to be role models in their communities.

It is not "know-how" but "know-who". Anything is possible if you know the right people in the right place at the right time.

Education does not have a monopoly on learning now.

Spotlight Session

Design for Change Contest
Kiran Bir Sethi

WISE was honoured to invite Kiran Bir Sethi to present a Spotlight Session on the "Design for Change Contest" which she is currently promoting. This is an extraordinary movement that shows how, from small beginnings, truly innovative ideas can be replicated and scaled up with amazing speed – in this case, empowering hundreds of thousands of children worldwide to improve their communities.

Kiran Bir Sethi is Founder and Director of The Riverside School in Ahmedabad, India, where the Design for Change Contest has its roots. She has a design background and also founded the "aProCh" ("A Protagonist in every Child") initiative which is attempting to make Ahmedabad more child-friendly and for which she was made an Ashoka Fellow in 2008. In the course of the Summit she was also a speaker in the Breakout Session on Designing Adaptable Curricula.

In 2009, the "Design for Giving" School Contest was launched through a simple toolkit in eight regional Indian languages. Schoolchildren across India were encouraged to participate in a one-week project to change some aspect of life in their own communities. As a result of the overwhelming response to the simplicity of this idea, in 2010 the Contest went global as the "Design for Change" Contest. The toolkits were available in English, Spanish, Finnish, Mandarin, Bahasa and Braille, besides 10 regional Indian languages.

Twenty-two countries across the globe participated in the Contest,

involving 250,000 children, their teachers and parents. With its slogan of "I can!" it is the largest movement of change by children in the world. The contest encouraged students to "Feel, Imagine, Do and Share". Children of all ages designed and implemented projects that really benefit their communities, from catching rainwater and saving it in "water sheds" to challenging age-old superstitions in rural communities, from earning their own money to purchase school computers to tackling loneliness or raising collective awareness of the need for efficient garbage disposal. As a result, throughout the world young people have been learning to be agents of change, proving that they have what it takes to be able to "design" the future of their societies.

Creative Arts in Education

" All students, regardless of the disciplines they happen to be studying in higher education or, indeed, in secondary education, should have a balanced curriculum. The distinction between the creative arts on the one hand and science, technology, engineering and mathematics on the other, is a false distinction because, regardless of the discipline you study, students and employers need all that mix of skills. "

Prof. John Tarrant, Moderator

Speakers

Prof. **Simonetta Carbonaro**, Humanistic Marketing, Design Management, University of Borås, The Swedish School of Textiles (Sweden)

Prof. **Rita Irwin**, President of the International Society for Education through Art (InSEA) (Canada)

Prof. **Elaine Thomas**, Vice-Chancellor, the University for the Creative Arts (UK)

Moderator

Prof. **John Tarrant**, former Secretary General, Association of Commonwealth Universities (ACU) (UK)

Prof. Rita L. Irwin

Challenging Education through the Arts

Whereas arts venues call us to experience the fullness of our humanity, schools are often limited to reaching the cognitive potential of students at the expense of realising their full human capacity. Current K-12 education relies heavily on science, logic and rational knowledge, and on standardised forms of assessment. It is ironic that the aim to create inspired, creative and imaginative employees has been neglected by these traditional forms of education.

Education through the arts provides a rich base from which to explore ideas, sensory qualities and often penetrating questions and personal feelings. It stresses a more holistic education by infusing the arts through all education experiences. While recent research shows a positive relationship between artistic learning activities and mathematics scores, a holistic education is not provided at the expense of mathematics: indeed, research shows that a balanced curriculum strengthens all learning. Therefore, learning in, through and from the arts is important for challenging the design of education for all age levels.

UNESCO promotes three main goals in its Seoul agenda: to ensure arts education is accessible as a fundamental and sustainable component of education; that activities and programmes are of high quality in conception and delivery; and that we apply arts education principles and practices to solving today's social and cultural challenges.

Education through the arts provides a rich base from which to explore ideas, sensory qualities and often penetrating questions and personal feelings.

Prof. Simonetta Carbonaro

Change for Sustainability

Change starts with the idea of being oneself and activating our self-reflective capabilities, on the one hand, and our empathic capabilities towards other people, on the other. Being oneself also means mastering the art of thinking and acting differently, and

designing a different and more sustainable lifestyle. Design thinking is a methodological tool for practice-based actions used to develop systemic processes that respond to problems and challenges, and it moves beyond the design of material objects to the design of how we live our lives. Sustainability has been used as the latest fashionable keyword for many kinds of misinterpretation or to embellish business-driven discourses. However, genuine sustainability has become a vital transformational project thanks to artists and cultural leaders keeping a critical eye on how we use the notion of prosperity.

The continuous cultivation of knowledge and the creative arts generates new sources of knowledge, but the cultivation of culture and art needs time and space. Our old education system is not responding satisfactorily to those needs. Schools have transformed themselves into factories that produce technicians, consultants, designers and creative workers, and art has been put into an art event marketing box. The arts and culture have to be present everywhere and to act inwardly as well as outwardly. We need to support a view of art which scrutinises with a critical eye the foundational myths of Western society and to see education for creativity, and creativity for sustainability, as the source of regenerative knowledge.

The arts and culture have to be present everywhere and to act inwardly as well as outwardly.

Prof. Elaine Thomas

The Value of Creative Arts in Education

A report by Universities UK (UUK) found that graduates in creative arts and design, when asked to evaluate their own education, stated that they valued creativity and education. There is also evidence that the attributes required for employment include creativity, problem solving, independence, innovation and collaboration, and graduates considered these intrinsic to a creative education. Among the qualities that are crucial to the study of creative arts are strong motivation, talent and skill, a creative approach, creative potential, individuality, independence, competitiveness, passion, curiosity and imagination.

Creative arts students at the higher level have a capacity for reflection and judgment, for formulating and communicating complex ideas, and for manipulating imagery and data, a willingness to challenge and to engage in teamwork, and adaptability. A report by the Council for Industry in Higher Education (CIHE) argues for a deeper engagement between universities and creative industries, a fusion of technology between creative and digital industries and the centrality of creativity within these industries. It also recommends that universities embrace, and be rewarded for, interdisciplinarity. We need to enhance the employability and enterprise skills of students and address the false opposition between creative and technical subjects.

Questions and Answers

Prof. John Tarrant, Moderator: How real is interdisciplinarity in the world of art and design?

Prof. Simonetta Carbonaro: Interdisciplinarity and diversity are present already in the classroom in Sweden, but there is also transdisciplinarity, meaning that the intended users of our research are the public, private and scientific worlds.

Prof. John Tarrant

Prof. Rita L. Irwin: I would also underscore the idea of enquiry as key to changing how education happens.

Prof. Elaine Thomas: The UK is poor in this regard. There are subject silos within higher education and it is important to incentivise research across disciplines.

From the floor: What are your views on using the arts as an intercultural bridge through education?

Prof. Rita L. Irwin: A lot of artistic activity happens within communities and it has a transformational effect.

Prof. Elaine Thomas: While the arts can bring together, they can also be a stimulus for confronting difficult issues.

Prof. Simonetta Carbonaro: Art has a real potential to drive prosperity.

From the floor: How can we use the arts to change the quality of discourse in and between societies? Can you share some thoughts on meaningful assessment of what the arts provide to students? What concrete possibilities are there for using the arts as instructional tools in science?

Prof. Elaine Thomas: Regarding assessment, in the arts and design we are very good at diagnosing skill development, creativity etc., precisely because they are difficult concepts.

Prof. Simonetta Carbonaro: Pedagogy should not just be about teaching fine arts from the first phase of development, but also about material culture, those aspects which enable people to create their own quality of life.

Prof. Rita L. Irwin: The arts must form an integral part of all education, both in terms of its developmental aspects and in terms of being in the world. They promote curiosity and enquiry, enabling us to become creators of knowledge and transformers of culture.

From the floor: What is the potential for informal settings to supplement your attempts to create a greater sense of the role of the arts?

Prof. Simonetta Carbonaro: We have seen amazing commonalities between people in different countries in times of adversity. This sort of research could form the basis of a transformational model for policymaking.

Prof. John Tarrant: What single point would you like to be carried forward from this session?

Prof. Rita L. Irwin: A balanced education needs the arts.

Prof. Simonetta Carbonaro: The arts and culture should represent the soul of humanity and prosperity within mainstream education.

Prof. Elaine Thomas: Key industry leaders should work with education at all levels, particularly in the context of the emerging and successful creative industries.

While the arts can bring together, they can also be a stimulus for confronting difficult issues.

The arts and culture should represent the soul of humanity and prosperity within mainstream education.

New Perspectives for the Media in 21ˢᵗ-Century Education

" *What really came out was the absolute importance of the content. We could be talking about new and very clever ways of actually transmitting this content, but unless the content itself is good, it isn't going to help.* "

Richard Lindley, Moderator

Speakers

Prof. Dr **Alexander Fedorov**, Pro-Rector, Taganrog State Pedagogical Institute, and President, Russian Association for Film and Media Education (Russia)

Mr **Yoshihiko Hibi**, Executive Director, Learning Media Division, NHK Educational Corporation (Japan)

Ms **Liliane Landor**, Controller Languages, BBC Global News, BBC World Service (UK)

Mr **Lucian Sârb**, Director of News and Programmes, Euronews (France)

Moderator

Mr **Richard Lindley**, veteran British television journalist (UK)

Lucian Sârb

Television in Education

TV was perceived as a catalyst for socialisation, but over the years it has become an increasingly individualised affair. It can also be dangerous, because TV sometimes takes over the role of babysitting. It is unlikely that we will be able to educate people through the use of global channels. We can inform them better and share the values of different cultures and countries on the same screen. We can provoke people's curiosity, present interesting stories on education and provoke governments to invest in education.

Yoshihiko Hibi

Education using Digital Media

Japan has a long history of using media in education. School broadcasts contributed to education in terms of equal opportunities and improvement of quality. Advanced media supported by digital technology are expected to develop a new perspective, as their great advantage is interactivity. The first attempt at interactive media was presented in 1990, combining HDTV and a digital context for education in ecology, entitled *Man and Forest*. One hundred video clips explaining different environmental issues were placed on a LaserDisc and students could use these materials or their own to create reports. The students gained confidence in their own abilities through being able to review difficult sections of the HDTV programme.

There were no Internet or media players at the time. This was the first integrated computer-TV educational programme created in Japan and was a step towards creating the digital curriculum. The distribution of this curriculum through TV and the Internet began in 2000. It consists of 37 different TV programmes for children and 3,000 video clips. Advanced digital media work as powerful education tools both for teachers and students. For teachers they become multifunctional teaching tools and for students at school or at home they function as convenient learning resources. One of the important tasks for the future will be to provide high-quality educational content through advanced platforms around the world.

Prof. Dr Alexander Fedorov

The Growth of Media Education in Russia

The failure to effectively establish interactive technologies in Russian education is due to the imperfection of the regulatory system, a lack of state and public authority support for domestic producers of educational games, a low level of support for educational programmes to develop interactive technologies and a lack of teaching expertise in the field. There has also been a lack of development in terms of media education, e-learning and distance education, as well as a lack of protection of intellectual property rights and control of piracy.

Taganrog State Pedagogical Institute has been training teachers in this area since September 2002. Currently, media education accounts for 14% of Russian schools in cities with populations of over 500,000. A number of media education websites have been created since 2005 and the number of publications on media education has increased rapidly. More than 40 educational programmes have been developed for schools and universities since 2000 and over 20 training manuals for different levels have been published. However, media education has not yet progressed beyond the experimental stage to that of widespread application.

Advanced digital media work as powerful education tools both for teachers and students.

Liliane Landor

The BBC's Educational Tools

The BBC Afghan service has been broadcasting an educational soap opera to Afghanistan for 16 years and it continued even through the Taliban era. It works because it is education wrapped up in everyday drama.

The BBC's mission is to inform, educate and entertain. As such, it is the only broadcaster with an obligation as part of its charter to provide formal learning opportunities to children from 9 to 19, but also to adults requiring basic literacy and numeracy skills. Bitesize is a revision service which uses a mixture of audio and video but follows the national curriculum and is used by 75% of all General Certificate of Secondary Education (GCSE) students. Words in the News teaches English through news broadcasts, exploiting to the best effect the educative potential of the material. A group of BBC Hausa journalists went to 30 villages in Nigeria and gave a mobile phone to each one. The phones are pre-programmed to link straight to the BBC Hausa newsroom, bringing in news directly from the villages.

The World Service Trust also offers low-cost English lessons by mobile phone in Bangladesh and this service has received four million calls since November. Radio is also a simple way to reach large numbers of people and the advantage over television learning is that a broadcast partner is not required. The BBC has used radio to expand the incomes of people working in the livestock sector in Somalia.

Finally, Zig Zag is an online journalism training project for Iran and Afghanistan run by the World Service and the World Service Trust. The teaching process takes place online through a protected site.

Radio is also a simple way to reach large numbers of people.

Questions and Answers

Richard Lindley

From the floor: Mr Hibi, how do you see the technology spreading outside Japan and what impact will it have in developing countries? Ms Landor, can more than one person listen to the English lessons, and how do they pay? Regarding Euronews, is it possible to create partnerships to promote the new learning concepts?

David Prosser, "Janala" Bangladesh Project, BBC World Service: You simply ring up and listen on your mobile phone, and the call lasts between two and a half and three minutes.

Lucian Sârb: Education is not currently an area that attracts audiences, which is why it is a strategic decision to put it on air, and you need to ensure you can provoke curiosity. The current programme, *Learning World*, is sponsored by Qatar Foundation. The private sector needs to get involved.

From the floor: How far are we from enhanced interactivity on TV for primary level? What dangers do you think could arise in future, and how could we prevent them? We need to inform people about the side effects.

Yoshihiko Hibi: We broadcast a lot of educational resources, but TV cannot be interactive in the full sense.

Liliane Landor: Dangers will be exemplified in attitudes rather than things. What is most important is how you teach and that you give people the confidence to be who they are and use their brains. I do not think information is intrinsically dangerous. Your approach to it could be problematic.

From the floor: Ms Landor, would it be possible to learn other languages besides English? Do you have outreach programmes for dialogue with the government?

TV cannot be interactive in the full sense.

Liliane Landor: We only teach English on the BBC but it would not be very difficult to extend the programme to others.

Lucian Sârb: We work on a global level but we are prepared to study proposals from governments and translate them into interesting content.

Liliane Landor: It is the BBC Learning Department's responsibility to fulfil its charter responsibilities but we receive no instructions from the government.

Richard Lindley, Moderator: Does the Russian situation have to do with adverse pressure or simply lack of support?

Prof. Dr Alexander Fedorov: We benefit from federal grant programmes for critical thinking and media literacy in middle schools and universities as well as teacher training but we need more opportunities to develop media education, following the great examples of Canada and Australia. In Russia, media education literacy courses are optional.

From the floor: Will you still have a role to play as TV stations proliferate?

Liliane Landor: The trick is to find a niche in the market. The BBC has its own brand and reputation and we need to work at establishing a footprint for the future.

Richard Lindley: What are the most important points to emerge from this session?

Lucian Sârb: Our role is to provoke people to learn more.

Yoshihiko Hibi: We need to distribute high-quality content. International co-production is one method of doing this.

Prof. Dr Alexander Fedorov: It is important to produce quality content.

Liliane Landor: The simplest idea can have great impact if used creatively with technological innovation.

We need more opportunities to develop media education, following the great examples of Canada and Australia.

The simplest idea can have great impact if used creatively with technological innovation.

Gala Dinner and WISE Awards Ceremony

On the evening of Wednesday 8 December 2010, the much-anticipated WISE Gala Dinner was held at the Dafna Hall, Sheraton Hotel in Doha, attended by Her Highness Sheikha Moza bint Nasser and all WISE speakers and participants. This was also the occasion for Her Highness, accompanied by H.E. Sheikh Abdulla bin Ali Al-Thani, to present the 2010 WISE Awards trophies to the six winners, following which the celebrated Lebanese soprano and composer Hiba Al-Kawas performed, accompanied by Qatar Philharmonic Orchestra.

Under the theme of "Transforming Education: Investment, Innovation and Inclusion", the 2010 WISE Awards set out to showcase and reward innovative educational projects that have had a significant impact in transforming education through sustainable investment strategies, innovative processes and technologies, and effective policies and practices promoting inclusion and diversity.

The six Awards winners were Mushtaq Chhapra for The Citizens Foundation in Pakistan; Cecilia d'Oliveira for MIT OpenCourseWare at the Massachusetts Institute of Technology in the USA; Ayla Goksel for Mother Child Education Program (MOCEP), ACEV-Mother Child Education Foundation in Turkey; Nnaemeka Ikegwuonu for The Smallholders Farmers Rural Radio (Farm 98.0 FM), The Smallholders Foundation in Nigera; Neil Turok for Next Einstein Initiative, the African Institute for Mathematical Sciences (NEI-AIMS) in South Africa; and Tove Romsaas Wang for Rewrite the Future, Save the Children, UK – leading for Save the Children International.

Videos relating to their projects can be viewed on the WISE Awards blog (http://awardsblog.wise-qatar. org/). During the Summit, the winners met participants, enjoyed a dedicated WISE Awards Corner in the Exhibit Area and presented their original projects at Spotlight Sessions. WISE will continue to promote and monitor their achievements.

For details of the call for applications for the WISE Awards 2011, go to the WISE website: www.wise-qatar.org
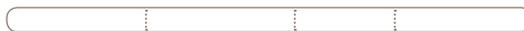
Day 3

Exploring Innovative Trends

"
It was a really good session. [...] Two key themes came out of it. One, concentrating on quality of teaching, and the other one on public-private partnerships. [...] We know what the problem is. What we need is solutions. Increasingly, the solutions are going to come from the bottom up.
"

Mike Baker, Moderator

Speakers
Mr **James Bernard**, Worldwide Director, Microsoft Partners in Learning (USA)
Mr **Martin Burt**, Founder and CEO, Fundación Paraguaya and Co-Founder, Teach A Man To Fish (Paraguay)
Lord **David Puttnam**, Chairman, Futurelab (UK)
Prof. **Zhou Qifeng**, President, Peking University (People's Republic of China)

Moderator
Mr **Mike Baker**, education journalist, broadcaster and author (UK)

Lord David Puttnam

Teacher Training and the Digital Age

Teachers and their pupils represent the most promising foundation for a sustainable society in the face of a challenging future. However, there will not be a future for any of us unless we become more imaginative regarding education. Governments will need to be far more serious about funding teachers and education than in the past, and that means ensuring that education policies are not just sufficiently funded but are agile enough to respond to broader societal changes, not least as a result of the development of the digital world.

Teacher training has tended to be seen as something done to teachers rather than being integral to the profession. The development of online technologies offers the possibility of dramatically improving both the productivity and the effectiveness of education. Countries need to revisit educational prejudices and budgets and make time spent in school more productive in terms of breadth of knowledge, and teachers need to ensure that this time is as efficiently and effectively spent as possible, irrespective of the technology. Pupils are very unlikely to remain engaged if an educational environment is much less stimulating than the outside world. We need to increase the participation of children from developing countries in higher education, otherwise we risk exacerbating divisions between regions. Furthermore, there is inter-generational alienation. The young no longer trust us and we need to win back their trust and respect.

Getting education right is not just one priority among others, but the key one for every nation.

Getting education right is not just one priority among others, but the key one for every nation. No education system can be better than the quality of teachers and the standards required of them. Teacher training in a digital age must be non-negotiable and continuous. Finally, there must be undisputed acceptance of the education of women.

Prof. Zhou Qifeng

Innovation and Learning in China

Innovation has been identified as the main engine for future development. It has been recognised that the current pattern of growth is unsustainable. We are faced with high levels of consumption of raw materials, environmental degradation, and unequal distribution of economic development. The Chinese government proposed a programme in 2006 whereby China will become innovation-driven by 2020, and highlighted that capacity building for innovation had become the core of national strategies. The importance of stressing innovation through educational reforms was stressed. The consensus is that the key is to transform China into a country with high-quality human capital.

The key is to transform China into a country with high-quality human capital.

A series of policies has been put into effect, centring on the national strategy of scientific and technological development, and developing the capacities of individual institutions and the system as a whole. Universities currently play an important role in innovation, with 52% of basic research funding going to research institutions in 2008. Peking University has taken strides towards becoming a world-class research institution, and has implemented initiatives on geology, paleobiology and conservation of national biodiversity while improving local living standards, and continuing education for disadvantaged groups.

James Bernard

Innovative Practices for Learning

Most educators do not know how to use innovative teaching practices in the classroom. However, innovative practices in schools and teaching can change children's lives. Students need to have the ability to drive their own learning journey, regardless of classroom size, and teachers must be ready to facilitate ➔

that. The support of teachers is key to student-driven learning, but teachers should also have the support of school leadership. Innovative schools must also have the support of the school system, and new trends such as cloud computing should help support evolving school systems. Public and private sectors need to partner effectively to create change. Finally, it is critical to work with the next generation of teachers so that they can use their technological skills to help students gain the skills they need.

The Partners in Learning initiative by Microsoft works by building capacity, i.e. helping teachers use technology more effectively in the classroom and helping school leaders manage schools. Secondly, it is about growing learning communities by building networks among teachers worldwide. Thirdly, it is about expanding teaching and learning practices. An excellent education is a basic right and an imperative; technology is an enabler and connector, but it has to be used appropriately; and effective and immersive learning practices can improve outcomes. Committed participants are essential to advancing education.

Martin Burt
Learning through Earning

Maybe education today is not about access but about quality. Therefore, we are faced with the possibility that just building schools is not the solution: people drop out of school because they are from poor households, go to bad schools etc. The fact is that in many countries the budget of the education ministry has doubled without a corresponding doubling of results, because the funding is for the ministry and not education. We have added earning to the principle of learning through doing, and this has resulted in an entrepreneurial spirit, raising 100% of its $300,000 (US) budget on campus, with no reliance on government funds or donations. We are now working with 50 partners in 27 countries.

We need to try to be innovative, to believe that education can pay for itself, and that the solution to the problem of education may be in appealing to the dignity of those we are trying to serve.

Questions and Answers

Mike Baker

Mike Baker, Moderator: David Puttnam, how do we innovate to ensure education is owned by teachers? Might it be better for teachers to decide their own professional development rather than having it prescribed?

Lord David Puttnam: Teaching has remained substantially the same for generations. Teachers' CPD should be part of their obligation, but improvement of their skills should also be reflected in their salaries.

Mike Baker: Where do innovations come from, students, institutions or governments?

Prof. Zhou Qifeng: Institutions should help students develop their curricula.

Mike Baker: How do we scale up what you are doing to a wider range of teachers?

James Bernard: We have teachers share best practices through cross-border exchange. We need to scale it worldwide by getting teachers connected online.

Mike Baker: Martin, how do you scale up your model and will it apply to other types of economy?

Martin Burt: We are open to ideas, because it is counterintuitive to say that education pays for itself.

From the floor: Could we introduce generalised assessments to validate the initiatives you suggest? Secondly, why do you see private systems as a threat? Thirdly, how do we overcome the infrastructure deficit?

Lord David Puttnam: It would be helpful to develop a commonality of interests to drive innovation. I see privatisation as partially a threat to the ethos of learning.

James Bernard: We are at a point where infrastructure is becoming more cost-effective, but you need to couple it with teacher training and school leader training.

Martin Burt: Infrastructure in our case is what society and the market wants. It is about teaching the teachers.

From the floor: Professor Zhou, do you have any initiatives to extend your graduate programme to other universities?

Prof. Zhou Qifeng: We encourage cooperation among Chinese universities and with institutions outside China.

From the floor: Would Microsoft be willing to partner with the Middle East as well?

James Bernard: We see tremendous opportunities, and we would like to explore innovative education and spread this knowledge into other parts of the Middle East and Africa.

Martin Burt: It is sometimes easier to adopt a technology in the case of South-South cooperation, because the solutions and approaches may be similar.

From the floor: Can we re-frame and so get beyond the relationship between public and private? Can Microsoft help in terms of remote access? When will states recognise the need to change educational curricula?

Martin Burt: Our role as civil society is to challenge the system, because it is bankrupt.

James Bernard: We can help in rural areas if there is a basic infrastructure there in the first place.

Martin Burt: Regarding the third question, we need to work together and allow governments to adopt a flexible approach.

Mike Baker: What concrete action point would you like to bring forward on this topic?

Lord David Puttnam: The private-public debate should not be allowed to result in a land grab, and the private sector should not be allowed to pay lip service to education.

Prof. Zhou Qifeng: People from China, Korea and other Eastern countries should be aware that this is a wonderful platform to exchange ideas.

James Bernard: People should work in public-private partnerships to use technology effectively in the classroom and promote learning technologies.

Martin Burt: Education should be about the dignity of the students and unleashing the resources of the poor rather than money.

Our role as civil society is to challenge the system, because it is bankrupt.

People from China, Korea and other Eastern countries should be aware that this is a wonderful platform to exchange ideas.

Lessons from Cognitive Science

❝The most striking and counterintuitive lesson comes from studies of the infant, in which we discover that, although the infant cannot directly express itself, it has – almost from birth – a keen awareness of the knowledge which the caretaker is imparting to it. Children are pre-programmed to be communicative, social learners. So the terrain in which cognition, learning, teaching and the social and emotional dimension all come together – the way we would want them to come together in their correct educational framework – is all prepared in the child's brain.❞

Prof. Daniel Andler, Moderator

Speakers

Prof. **György Gergely**, Professor of Psychology, Cognitive Development Center at the Central European University (Hungary)

Dr **William M. Jenkins**, Chief Scientific Officer and Founder, Innovation and Research Department, Scientific Learning Corporation (USA)

Dr **Barbara Wanchisen**, Director of the Board on Behavioral, Cognitive, and Sensory Sciences and of the Committee on Human-Systems Integration, National Research Council (USA)

Moderator

Prof. **Daniel Andler**, Chair of Philosophy of Science and Epistemology, Université Paris-Sorbonne, and member of the Institut universitaire de France (France)

Dr William Jenkins
Computer-Based Approaches to Learning

Our general experiences, as well as both formal and informal learning, impact neural maturation. Sophisticated imaging techniques for measuring brain function and brain anatomy, along with well-conceived parallel behavioural measurements and experiments, have contributed to better and more complex models of the neural basis of cognitive functions and learning capacity. Also, myelination, the insulation around the brain's axons, impacts the speed of information transfer in neural networks.

When reading, we enact a cognitive performance in response to a set of instructions, decoding the letters of the printed text into sounds and images. This model was tested in a school-based university functional magnetic resonance imaging study using behavioural measures with pre- and post-testing and a computer-based intervention.

Research of this kind shows that the brain is plastic throughout life and that there are basic cognitive building blocks that support all kinds of learning. We therefore know that we can produce better learners. Effective collaboration will be vital and computer-based approaches to learning, remediation and intervention will lead to improved best practice.

There are basic cognitive building blocks that support all kinds of learning.

Prof. György Gergely
Lessons from Very Early Learning

Through our emerging knowledge of cognitive science, we are beginning to understand the evolved structure of the cooperative human mind that is specialised for the receipt of cultural knowledge and we need to use this knowledge to develop technologies to exploit mind design.

From birth, the human mind is designed to expect and receive social learning that is geared to pass on cultural knowledge from generation to generation. There is now evidence for a specialised

From birth, the human mind is designed to expect and receive social learning.

social communicative learning mechanism of "natural pedagogy" that receives knowledge from social others who address the child.

This new science of social learning emerges from a multidisciplinary effort of cooperative scientific work from a variety of disciplines and we have been able to show that in infants that are too immature to give motor responses there is in fact an extremely prepared and active social learning mind. They are responsive to different ostensive – that is, non-verbal - communicative signals, such as direct eye gaze, and even react to social robots. New cutting-edge technologies help with this research into the infant brain and the natural processes of education. We need to develop our education systems so that they have a recipient design and to address learners through ostensive communicative content.

Dr Barbara Wanchisen
Translating Science to Help the Practice of Education

The National Research Council of the National Academies produces about 200 free reports every year, including reports on education.

We are not adequately translating cognitive behavioural science to help the practice of education and should look elsewhere for ideas about putting this into practice. The US's Defense Advanced Research Projects Agency (DARPA), the National Institutes of Health (NIH), the Institute of Education Sciences (IES) through its What Works Clearinghouse (WWC) and the National Science Foundation (NSF) through its Science of Learning Centers are all doing interesting work in translating science into practice.

Educators and scientists need to collaborate more. The successful translation of science to any practice domain depends on the size of the population and the intensity and immediacy of the need. Unfortunately, we tend not to treat education as such an immediate need as military or health matters because it takes a long time to educate somebody. Key to all this is to have effective advocates and policymakers and an infrastructure that supports creative approaches and validation.

Educators and scientists need to collaborate more.

Questions and Answers

From the floor: Firstly, should psychotropic drugs be used to accelerate learning gain? Secondly, particularly when we work online, we have got to go quickly to the result and the application, so what should be the approach towards that? Thirdly, our tragedy is that false practices are rife in our systems because the theory is so out-of-date.

Prof. Daniel Andler

Prof. György Gergely: There have been great advances in psychotropic drugs, but it would be very dangerous to jump quickly to conclusions and applications that involved their use.

Dr William Jenkins: The mechanisms of brain plasticity are still in play and it is important to understand how best to apply them in the context of learning. As regards the lack of translation, I think that there has been some arrogance on the part of the scientists.

From the floor: Firstly, will the constant interaction with technology by teenagers lead to an impairment of the part of the brain that deals with executive functions? Secondly, I would like to understand the connection between the brain and the mind. Thirdly, has any research been done on socialisation processes?

Prof. György Gergely: There is good evidence that child-attuned interactive mothering and the child's maternal interactions correlate in the long run with Intelligence Quotient (IQ).

Dr William Jenkins: I think that the use of technology having a detrimental effect on executive functions will be the exception rather than the rule.

Dr Barbara Wanchisen: I believe that the mind and the brain are the same thing.

Prof. György Gergely: As regards practices in the classroom, a very important area is the natural gesturing that is done by both teachers and learners. Some people are born to be good teachers, while others are not.

From the floor: Firstly, where is the right place for doing this kind of research? Secondly, is it better for the individual to tailor his own learning path or to have help from a professional? Thirdly, has any research been done on autistic children?

From the floor: I am Soo Siang Lim, Program Director of the Science of Learning Centers. Learning is complex and no one discipline will provide the answer. Our centres are therefore not only about research, but also connect research to potential stakeholders.

Dr William Jenkins: I really appreciate the work of the Science of Learning Centers, but we have a long way to go.

Prof. György Gergely: Cognitive science is a science of emotions as much as of cognition because the two are not separable. As for autism, this is an extremely complicated area, but a lot of research is being done.

From the floor: Firstly, authority for the translation of research into practice rests with the colleges of education and schools of education in the United States and they should not be let off the hook. Secondly, could a neuroscience research programme be designed just on the question of the translation between science and practice?

Dr William Jenkins: I think that the Science of Learning Centers in the United States are trying to do exactly that.

A very important area is the natural gesturing that is done by both teachers and learners.

Games for Serious Learning

"If we understand how games can leverage learning in ways that are unique, how – instead of us just thinking of them as a motivator – they can add rigour, authenticity and relevance, and how they can allow young people to do things they couldn't do before – then I think we're going to see games moving to more of a central role in schools."

Bruce Dixon, Moderator

Speakers

Prof. **Sara de Freitas**, Director of Research, Serious Games Institute, Coventry University (UK)

Mr **Ntiedo (Nt) Etuk**, Co-Founder and Chief Executive Officer, Tabula Digita, Inc. (USA)

Mr **Derek Robertson**, National Adviser for Emerging Technologies and Learning, Learning and Teaching Scotland (UK)

Moderator:

Mr **Bruce Dixon**, Director, Preston Dixon Consulting (Australia) and Founder and President, Anytime Anywhere Learning Foundation (USA)

Derek Robertson
Games as Learning Tools

Dr Kawashima's Brain Training was a game which was built for entertainment, not education, but we decided to do pre- and post-tests with over 600 children in Scottish schools. They played the game for 25 minutes first thing in the morning over a 9 to 10-week period. We found a statistically significant improvement in the sample group, by 40 points for children who had been working at a significantly lower level than is expected for their age. However, the most dramatic feature was the speed of calculation which dropped from 19 minutes at the beginning to 13.5 minutes. There was also an increase in punctuality and behavioural improvement.

The use of games in learning is now seen as mainstream, with games being seen as texts in Scottish schools. Game designers seem to know how to make games for learning that are challenging as well as appealing. We are interested in making the jump from using games to drive learning to getting children to create games, and two members of my team have put together a series of video tutorials on game design applications. Good teachers use good resources to bring about good teaching and learning. Commercially available games are great tools for learning and are being used to great effect.

> We are interested in making the jump from using games to drive learning to getting children to create games.

Prof. Sara de Freitas
Serious Games

Serious games are games developed using games technology for serious purposes, mainly education and training, providing immersive experiences that represent a paradigm shift in learning. A study we carried out which polled 223 nurses and ambulance workers indicated that 80% of males under 30 played games on a regular basis, but fewer females under 30. Regarding game types, most female workers enjoyed puzzles, while male workers played action, adventure, arcade and fighting, simulation, sports and strategy games.

We asked about preferred learning methods, and most said they preferred to learn on the job. We also saw this in other sectors. One of the reasons for this is that there are active and passive learning methods. Learning happens a lot more easily when you are doing the real thing, and you remember it for a longer time. Therefore, simulating the real thing in a game will have the same effect. The more the senses are engaged, the more information enters via different channels in different ways, making learning more effective.

How will learning look in the future? We see it as involving multimodal interface devices such as brain-computer interfaces and haptics, and advanced artificial intelligence techniques. The concept is a convergence between virtual environments and games. We use a model of ancient Rome in a serious game where the player interacts with virtual agents within the environment and through that can learn about history, citizenship, economics etc. Teachers can also author tools around it. We think that game technologies will change educational approaches, such as the potential for seamless assessment. Emotional levels are elevated, making it more likely you will remember what you are learning, you are much more motivated and engaged, and there is potential for different types of assessment.

> Emotional levels are elevated, making it more likely you will remember what you are learning.

Ntiedo Etuk
The Rise of Immersive Learning

There has been an over-reliance on grant funding in the gaming sector because a lot of people do not have to scale the games and there is too much focus on schools, meaning you lose the social aspect of gaming. One of the big problems in education is that there is an engagement problem: the US ranks 25 out of 30 countries in science and 21 out of 30 in maths, 30% of high school students drop out and 90% of instruction still uses textbooks. An Organisation for Economic Co-operation and Development (OECD) study showed that 61% of students in the US found school boring. The countries with the highest boredom factor had the lowest achievement.

However, 290 million people a month play social games and the average age is 34. The University of Central Florida found that the increase in scores due to using our games on their district exams was more than twice that of the control group, and 75% of those who used the software in Broward County passed, as opposed to 37% who did not. The average increase in achievement is 20%, not to speak of the increase in engagement. Increased time on the task will lead to increased achievement, so if you increase the amount of time students want to spend, they will spend more time and their scores will increase.

> **The biggest problem is the time constraint in schools, whereas video games are all about exploring.**

One of the challenges with putting games into schools is that teachers do not understand how education works in a game. However, the biggest problem is the time constraint in schools, whereas video games are all about exploring. We are involved at the introductory stage, after which the teacher is responsible for student practice and assessment.

Questions and Answers

Bruce Dixon

From the floor: How difficult was it to get the school systems to implement the games within the curricula? Mr Etuk, I was shocked to see that the material involved shooting. Are the students enthusiastic about the results or the fact that they just shot something for 500 points?

Derek Robertson: We have grown it from the ground up. Working at a national level, I have reached out to the local authorities, who have introduced me to teachers, who have introduced me to parents. We have shown how games can have a positive impact on the curriculum.

Bruce Dixon, Moderator: Are these games supplementary to the curriculum, or another way for learning to take place?

Derek Robertson: We use games as a contextual hub in which the teacher extends what the children learn in the game.

Ntiedo Etuk: We are always asked about the results when we go into schools. The enthusiastic reactions of the students are themselves convincing, but we are also asked whether we train the teachers. Secondly, the reason we put that element into the game – which was not shooting but "gooping" - is that we know what works in gaming, but you have to be responsible. Not one school has stopped implementation because of concerns about violence.

From the floor: Firstly, where will virtualisation lead in education? Secondly, the reward aspect is important alongside that of competition. Is experimentation not central to learning, and how do you contextualise experimentation?

Prof. Sara de Freitas: We do not really know the implications of immersive learning, but at the moment it is more of a hybrid. Regarding experimentation, this is at the heart of how we learn, and games are a great format for that.

Derek Robertson: We can learn a lot in terms of how children can take charge of their own learning and manage their own progress, and how games encourage that. Regarding experimentation, good teachers with good resources can address all curricular areas through the challenge and appeal of games.

Ntiedo Etuk: It is inevitable that experiences will become more immersive. Education at the moment is devoid of emotional feedback and immersive environments allow that to happen.

From the floor: What are your views on the ability of teachers to integrate these games into the curriculum so that they can use them, as opposed to just increasing their workload? Mr Etuk, what did your game look like before you made changes to satisfy the teachers? Do your games include the aspect of collaboration and do the students chat about the subject matter?

Derek Robertson: We are trying to integrate these technologies into the everyday experience of teachers and pupils. This is no different from using other resources in education.

Prof. Sara de Freitas: The blended learning approach seems to be more effective in e-learning generally. Furthermore, there is chat in quite a lot of these games and a lot of them are about interactive learning. We have found that games do foster social and interactive learning and design is a key aspect.

Bruce Dixon: Do games offer better potential for developing collaborative skills?

Prof. Sara de Freitas: The potential is different from that of earlier tools and the capabilities are more diverse.

Ntiedo Etuk: When teachers become more familiar with the games the amount of time they are willing to spend with them increases.

From the floor: I hope you will be able to help teachers to become more enthusiastic about these tools and to use them more effectively. Could you throw more light on the funding landscape for the use of these tools?

Prof. Sara de Freitas: One of the reasons teachers like the games is that you can build some of the more boring tasks into them and spend more time on the analytical side. Teachers tend to be quite familiar with games anyway.

Bruce Dixon: How will we scale and fund this platform?

Prof. Sara de Freitas: We have seen a major reduction in game development costs and that is likely to continue.

Ntiedo Etuk: Firstly, professional development is critical and it will evolve. At the moment, we have to train teachers to be comfortable with the technology and to get the information out. Secondly, a lot of venture capital is coming into the picture and one of the challenges is that venture capital does not like educationally oriented applications.

Education
Millennium Development Goal (MDG2)

The Millennium Development Goals

1 • Eradicate extreme poverty and hunger

2 • Achieve universal primary education

3 • Promote gender equality and empower women

4 • Reduce child mortality

5 • Improve maternal health

6 • Combat HIV/AIDS, malaria and other diseases

7 • Ensure environmental sustainability

8 • Create a global partnership for development with targets for aid, trade and debt relief

The target year for the Millennium Development Goals (MDGs) is 2015. With a select gathering of education stakeholders, this Special Session of the WISE 2010 Summit focussed on the second MDG, "Achieve universal primary education". The presentations of the panellists were followed by a lively discussion with the floor to elicit ideas, particularly from the private sector, civil society and NGOs, bearing in mind that MDG2 is in jeopardy unless actions are taken and resources earmarked. Concluding the Session, Mr Stelzer maintained that MDG2 could be achieved through innovative funding models such as Conditional Cash Transfer (CCT). The Brazilian example of the latter, Bolsa Escola, pays parents to send their children to school, where they are educated, fed and vaccinated. Thirty four million people have benefited from this in the last eight years at a minimal cost of 0.3% of the budget. The efforts of Her Highness Sheikha Moza bint Nasser to raise global awareness of the importance of new, innovative ideas and partnerships were praised by Ambassador Dho Young-Shim.

Panel

Her Highness **Sheikha Moza bint Nasser**, Chairperson, Qatar Foundation

Ambassador **Dho Young-Shim**, Chairperson – Board of Directors, UN World Tourism Organization's Sustainable Tourism for Eliminating Poverty (ST-EP) Foundation (Republic of Korea)

Thomas Stelzer, Assistant Secretary-General, United Nations Department of Economic and Social Affairs (UNDESA)

A video contribution on the MDGs in Africa from **Graça Machel**, former Minister of Education and Culture in Mozambique

Moderator:

Ghida Fakhry, News anchor for Al Jazeera, English

Quotes from the Session

"Education should be at the top of each national strategy because we believe that once we have solved the issues of education and illiteracy we can solve other problems and we can achieve other MDGs that work."
Her Highness Sheikha Moza bint Nasser

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"You have this WISE Summit here. That is a huge opportunity. If you, as one of your conclusions, suggest – and if representatives of the global education system agree – to dedicate a certain percentage, maybe 3% or 2% of national budgets to education – if that is a concrete outcome of your Summit, we can mainstream this into many other summits, then we can start holding governments accountable. We can say 'Where are the 2%, or the 3%?' So far, we don't have numbers. We have numbers for agriculture, we have numbers for social investment, but not in education. So this is a concrete invitation, or suggestion, for an outcome of the WISE Summit which will really inspire and help our work."
Thomas Stelzer

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"Who are our targets? Sixty-nine million children who can't go to primary education. Who are they and where are they coming from? They're coming from what we call the 'bottom billion', the billion people who cannot spend a dollar a day. The private sectors are very important, but who are they? They're profit-oriented organisations. We have to give them some incentive."
Ambassador Dho Young-Shim

Learning through Mobile Devices

We saw that there were two very interesting possibilities. One was empowering young people as peer trainers and peer assessors working in ever-increasing networks and looking at whether that has a future in terms of being a school of everyone and a school of everything, rather than restricting to the current model. The second was looking at how the learning device in the mobile is actually a personal device. This is taking learning to the individual. The individual sees it as a personal device and they feel less threatened in that environment. They feel more open to learning.

Dan Buckley, Moderator

Speakers

Mr **Esko Aho**, Executive Vice-President, Corporate Relations and Responsibility, Nokia Corporation, and former Prime Minister of Finland (Finland)

Ms **Jessica Colaço**, Manager, iHub (Nairobi's Tech Innovation Hub) (Kenya)

Mr **John Davitt**, education innovator and digital toolmaker, NewTools.org (UK)

Mr **David Prosser**, Head of Programmes for Asia, BBC World Service Trust (UK)

Moderator

Mr **Dan Buckley**, Director of Research and Development, Cambridge Education (UK)

John Davitt

The Learning Dance

Learning is a dance. The music is the delight of peers, the correct environment, the guide and mentor. Technology is not the music but it may be one of the instruments.

Our first mission is to acknowledge difference, build on it and reframe. Where the Internet falters, the pocket might prevail: there are 4.5 billion people in the world and 3 billion handheld devices, so we are not talking about waiting for the possibility of connection, though there are huge issues of cost, renewability and access. We need to take the tools and turn them to purposes the makers never expected. They were not thinking about microfinance, health advice, or pest control, but that has happened because people became empowered.

We need to take the tools and turn them to purposes the makers never expected.

Twitter was voted the number one teacher's resource in America, though it was not designed for that. What matters is what we do with the tools, and how we shape and build them. One way of doing so is to consider that our pedagogy in the developed world might have gone off the rails. One of our open-source tools is the Learning Event Generator, which simply maps out 400 different ways of showing what you know.

David Prosser

Using Mobiles in Teaching

I have two main points. Firstly, the BBC has been using various media, principally radio and the Internet, to teach languages for about 60 years, but there is something different about learning on mobile which we are just beginning to understand. Secondly, if we are serious about having educational impacts in the world's poorest countries, we need to adapt our offerings to the technology people already have. It is estimated that mobile Internet is expanding at seven times the rate of Internet on PC, but only 17% of people in developing markets will have smart phones by 2014.

Mobile Internet is expanding at seven times the rate of Internet on PC, but only 17% of people in developing markets will have smart phones by 2014.

English is the most commonly failed exam in Bangladeshi schools, and many English teachers have poor communicative skills in English, so many learners have had negative experiences of the learning process. The Department for International Development (DFID) is funding a programme called English in Action, which aims to improve the English skills of 25 million people by 2017. In Bangladesh, there are 50 million SIM cards in use. The majority of people make voice calls rather than send text messages, largely because of unfamiliarity with the Roman alphabet. Ten per cent of phones are Internet-enabled, but only 5% have accessed the Internet. We launched an Interactive Voice Response (IVR) service through which phone users could access English lessons at a very low tariff. Since the launch in November 2009, there have been five million calls from 1.2 million people, accessing 3.5 million lessons. Seven out of eight users of this service have shown some language improvement.

Marketing a value-added mobile phone service is very important. You also have to keep the experience simple and costs low, to provide learning opportunities for poor people. The question is: Who is best placed to make the initial investment in this kind of mobile opportunity?

Jessica Colaço

Mobile Boot Camp

The mobile phone-based service M-PESA has gained 11.8 million users, or 30% of Kenya's population, since its launch in 2007, and is primarily used for money transfer. There are four principal ways in which the ubiquity of mobile use can benefit education. Firstly, we need to share skills with, and transfer knowledge to, the community. Secondly, we need to share ideas and brainstorm in groups for implementation in the community. Thirdly, we need to create an open learning atmosphere in which all opinions matter: we need to be a learning community. Finally, we need to create knowledge within the community.

We need to create knowledge within the community.

The mobile boot camp is a two-day crash course on the mobile industry and application development. It is held twice a year, in July and November,

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and the participants are mainly university students. More than 500 people have been trained since its implementation in November 2008, and these people are now thinking "glocally" (globally and locally) and implementing what they have learned within their communities.

Esko Aho
The Growth of Mobile Learning

Nokia estimated in 1990 that there would be 50 million mobile users by 2000, whereas there were 700 million. The speed of technological change is always much faster than we imagine, and so we need to emphasise other dimensions of mobile learning instead. Mobile penetration in Africa is 52%, but Nokia estimates that it will be one of the biggest markets by 2014, with over 300 million new users. Therefore, the connectivity is there, but the question is how to ensure that those devices are used in the most efficient way.

This can be done through revolutionary technology, the right timing, the right talent, risk-taking capacity, and the right kind of ecosystem. The first four are already in place, but the fifth is the crucial issue that needs to be addressed. The most important step in making mobile learning opportunities available to all is to ensure that the total cost of ownership is as low as possible. Teachers must be able to make full use of these devices. Finally, the developer community needs to be involved in this process.

One of our projects was to look at what could be done with mobile technologies in mathematics in South Africa, and the objective was to achieve scalability, affordability, sustainability and replicability. The first small pilot programme has now advanced into a second, which covers 4,000 students and children. We are now piloting this project in Finland to ensure that it works in all environments. The results so far are very promising, with both improved performance and increased interest in mathematics. Imitation is an excellent method but it is not enough. Innovation is essential.

The most important step in making mobile learning opportunities available to all is to ensure that the total cost of ownership is as low as possible.

Questions and Answers

Dan Buckley

From the floor: What applications will be key to ensuring penetration of mobile usage, aside from SMS and IVR (Interactive Voice Response)?

Jessica Colaço: The next thing in Kenya will be IVR and mobile web.

Esko Aho: Technology will assist in helping poorer people access high-quality services.

David Prosser: There are opportunities at the back end, such as personalisation with the system recognising who you are when you phone.

John Davitt: We need to rediscover the power of the group in mobile learning.

From the floor: Mr Aho, have you come across discounted rates for educational use of mobiles?

Esko Aho: Operators in South Africa provided special rates. We need low rates to expand these services.

David Prosser: Getting the support of the regulator in Bangladesh was crucial from the outset.

Esko Aho: It is very important to incorporate social media into mobile learning opportunities.

From the floor: How do we ensure that the education market does not end up continually chasing the technology?

John Davitt: Sometimes we need to choose to bolster the important projects and take our eyes off what is on the horizon.

Esko Aho: We can rely on the resources, but the main problem is the human side, such as the capacity of teachers to use new methods. We need some risk-taking as well.

David Prosser: The pace of development is extremely fast, but we do not know what the destination is, so the challenge for education ministries is where to invest. You need to create great content and let the market decide the best way of delivering it.

It is very important to incorporate social media into mobile learning opportunities.

Jessica Colaço: The developers in the boot camps make the choices of what technology to go for, and they understand the market before coming up with an application.

From the floor: What kind of investments should we make at institutional level that would benefit us five years down the line?

Esko Aho: Investing in technology without changing the underlying systems produces extra costs. We need to break some traditional structures to make changes.

Dan Buckley, Moderator: What recommendations would you make to WISE?

Esko Aho: Governments have wonderful tools at their disposal, but there needs to be governmental initiative.

Jessica Colaço: Students know what they want and, given the tools, they will come up with innovative applications and solutions. We need to emphasise the importance of the community and working together.

David Prosser: Modest investments and simple solutions can improve learning. The poor must not be forgotten when it comes to mobile education.

John Davitt: We need to look at scalable models that facilitate group learning.

Modest investments and simple solutions can improve learning.
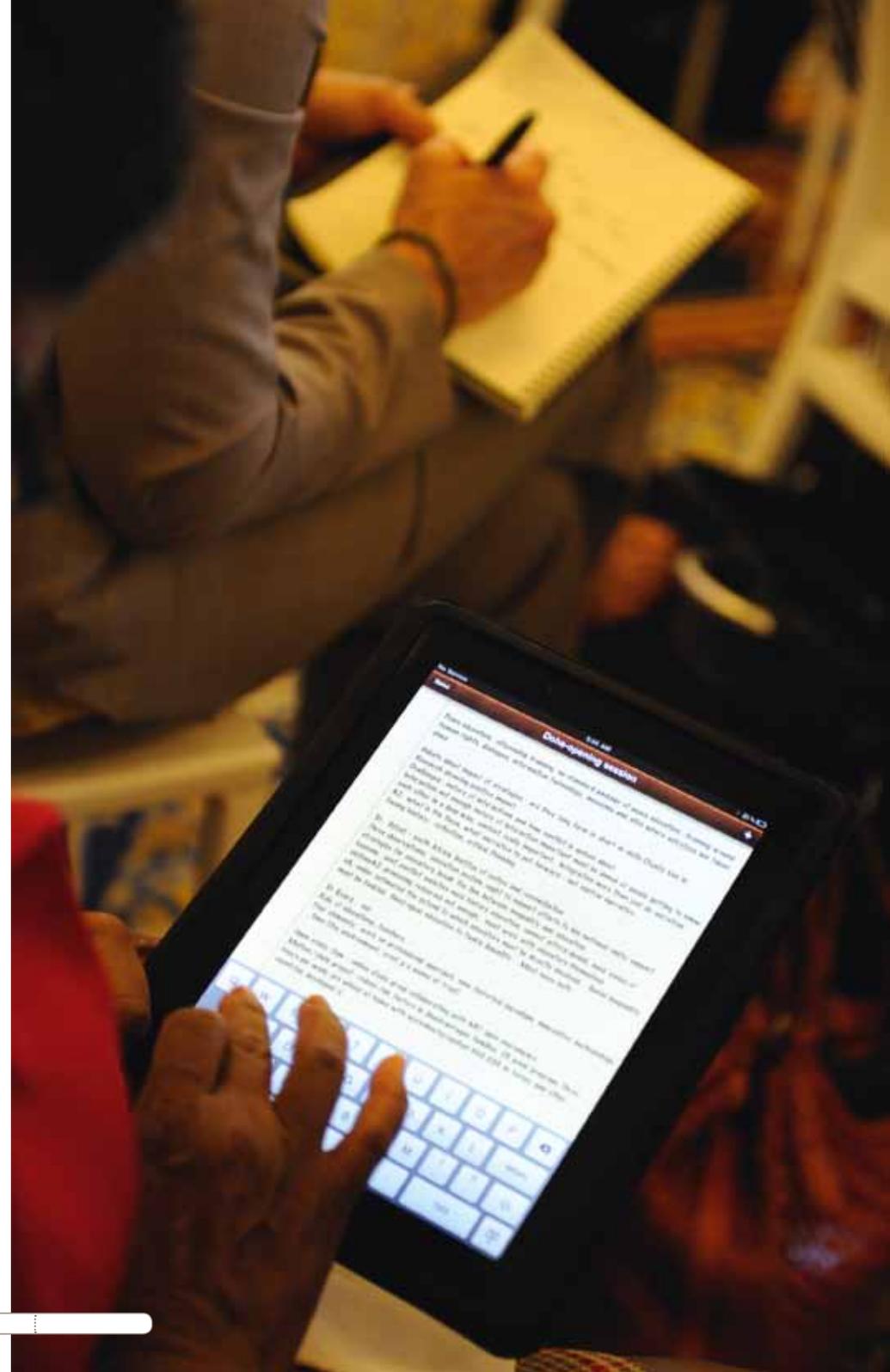
Social Media:
Trends in Collaborative Learning

"*Teachers and professors are going to have to give up control. That was what many of the students in the room were saying. At the same time, they are going to need to figure out how to offer guidance about what uses are acceptable, what uses aren't acceptable and, more importantly, they have got to learn when social media really help learning and when they are just a distraction.*"

David Wheeler, Moderator

Speakers
Mr **Abdalla Abdalla**, Student, Texas A&M University (Qatar)
Mr **Dan Sutch**, Head of Development, Futurelab (UK)
Prof. **Ellen Wartella**, Professor of Communication and Director of the Center on Media and Human Development, School of Communication, Northwestern University (USA)

Moderator
Mr **David Wheeler**, Managing Editor, *The Chronicle of Higher Education* (USA)

Dan Sutch

Making Sense of the Digital World

We need to recognise the opportunities provided by the use of social software, both in shared creation of content and wider access to audiences. However, these technologies fundamentally change the way we interact with knowledge. Education has moved from a broadcast model to one where we understand and make sense of information. We might need to rethink school organisation to provide a balance between providing information and supporting young people in creating knowledge.

This means that there is a shift from a supply-led to a demand-led approach to learning. We know that it is possible for people to come together through social media to create more appropriate learning activities. The question is what that means for younger learners and schools.

There is a shift from a supply-led to a demand-led approach to learning.

Prof. Ellen Wartella

The Limitations and Potential of Social Networks

The limitations of social networks must be noted as well as their potential. Social networking sites are better utilised by older high school and college students, as younger children are less likely to be reached by them. Secondly, research has shown that people use social networking for expressing identity and managing social life, not necessarily for education. Thirdly, research suggests that users can enter multiple communities of friends and manage relationships so that the online world of social groups tends to mirror the offline one. Fourthly, there are recurring examples of the negative consequences of using social networking sites.

There are also great educational opportunities, such as the growing use of Facebook and Twitter by teachers to communicate with students outside the classroom. Secondly, education-oriented action groups use

The limitations of social networks must be noted as well as their potential.

social media to extend their informational and educational outreach. Thirdly, there is a remarkable opportunity to create educational networks. Earlier technologies rarely met the educational potential expected of them and in this respect social networks are likely to resemble them. Their potential is in our hands, and we should create it thoughtfully and in collaboration.

Abdalla Abdalla

Learning through Social Media

The advantages of social media are ease of access, portability of technology, simplicity, and freedom of speech and expression. Using social platforms and other networking sites can help people reach their career goals more easily, while also educating people who may not know much about a particular field. Education can take place informally merely through the fact that people are interested in a subject.

Social media are entering into the employment sphere. Soon the blog will replace the CV. Students are already using social media to improve their educational skills. The question is how educational institutions can join in this process.

Students are already using social media to improve their educational skills. The question is how educational institutions can join in this process.

Questions and Answers

From the floor: The anonymity of the Internet allows racist viewpoints to pass unchallenged much more easily. We need to take a nuanced approach to expertise where social media are concerned and think about how we can bring different approaches together. Do you think that laws should be implemented against cyber-bullying?

David Wheeler

Prof. Ellen Wartella: There are attempts in the US to develop state laws against cyber-bullying and universities have taken on the role of teaching students responsible social-media usage.

From the floor: How can social media be used in assessment?

Dan Sutch: Regarding assessment, the barrier is where the things we assess are not what we value, and social media can widen the range of things we assess.

From the floor: New technologies create chaos and we need to be flexible and agile enough to deal with this.

Prof. Ellen Wartella: It may take us decades until we understand the consequences of this technology.

Abdalla Abdalla: People can learn things through these media that they may not learn formally.

From the floor: Does engagement with social media distract from serious study?

Abdalla Abdalla: Multitasking is easy and helpful and you can use social media even while studying. However, it depends how they are used and parents and educators have to understand them in order to help us use them.

Dan Sutch: Education is not just about learning but preparing people to use learning.

From the floor: Educating for the future is also about taking responsibility for your opinions. How do you respond to the issue of anonymity?

Abdalla Abdalla: Productive posts tend not to be anonymous.

From the floor: Where is the boundary between approachability and authority to be set?

Dan Sutch: There is no single answer. The relationships depend on the individuals.

Prof. Ellen Wartella: The boundaries are being challenged and we have to negotiate what is appropriate for each particular culture.

From the floor: How do you measure success in social media?

Dan Sutch: It depends greatly on what they are used for.

From the floor: Do social media have a real impact on learning?

Abdalla Abdalla: It tends to come from educators rather than students.

Prof. Ellen Wartella: It is another tool for learning so it is not surprising that it is being used.

From the floor: Why are social media not involved in teaching advanced subjects?

Dan Sutch: Curricula should always evolve to reflect the histories and values of communities. We should be helping people understand systems.

From the floor: What coming trends do you see in social media?

Prof. Ellen Wartella: People generally do not use social media in a political way and there has been no call to do so.

From the floor: What is your view on the institutional use of social media and what do we need to teach students so that they use social media well?

Prof. Ellen Wartella: Universities worldwide are using social media as one of many mechanisms, particularly in recruitment.

Dan Sutch: Institutions are based largely around groups, whereas networks are formed around interests. It is now more about mediation than access.

From the floor: How can we help the new generation to understand the educational impact of this technology?

Abdalla Abdalla: That would depend on how the learner wants to use the tool. Learners should teach their parents and educators and they should be ready to learn new things.

From the floor: Are there statistics which show that social media improve academic performance?

Dan Sutch: The improvements would probably be more around personal learning.

From the floor: How can teachers take the lead in teaching students new ways to use social media?

Dan Sutch: The best way to answer this is to look at the teachers who are doing this already. A range of supports needs to be in place for teachers who are trying new learning tools.

From the floor: We need to consider what young people want to create.

David Wheeler, Moderator: What action points can we bring from this discussion?

Dan Sutch: The motivations are different between learning and education and the challenge of social media is to link to both.

Prof. Ellen Wartella: Sometimes one needs expertise and sometimes information from a crowd source, and the question of distinguishing these is a difficult one.

Abdalla Abdalla: Educators need to get on board with social media, parents need to engage with their children and students need to stay on the safe side.

People can learn things through these media that they may not learn formally.

Sometimes one needs expertise and sometimes information from a crowd source, and the question of distinguishing these is a difficult one.

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ECOSOC-AMR
Regional Preparatory Meeting

As part of the Annual Ministerial Review of the Economic and Social Council on education (ECOSOC-AMR), a regional preparatory meeting on "Innovative Approaches to Reaching Women, Girls and the Marginalised in the Arab Region" was held on 9 December 2010 in Doha, State of Qatar. The meeting, held on the sidelines of the World Innovation Summit for Education (WISE) (7-9 December 2010), was hosted by Qatar Foundation and the Government of Qatar, in cooperation with the United Nations Department of Economic and Social Affairs (UNDESA), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF).

The meeting brought together a diverse group of regional stakeholders to discuss how innovative approaches, policies and targeted interventions can help reach women, girls and the marginalised. The meeting consisted of a panel discussion and a luncheon for Ministers and Heads of Delegation from the Arab region attending the WISE conference.

Key policy messages

The following key messages emerged from the discussion:

Progress in the Arab region on the education-related MDGs and EFA Goals

• Education is a key factor for sustained, inclusive and equitable growth and for achieving all of the Millennium Development Goals.

• Several Arab States have made great strides on the Education for All (EFA) Goals. Nevertheless, according to the EFA Development Index, no country in the region has achieved all EFA Goals.

• Countries of the region have made noticeable strides towards achieving universal primary education. However, over the last two to three years, progress has levelled off. Current education policies in the region are not retaining those who are in school, nor reaching out-of-school children.

Access to Education

• There is a need to provide equitable educational and learning opportunities for women, girls and marginalised groups by removing economic, social, religious and political barriers to education. This requires inclusive education systems as well as appropriate and targeted measures outside and within the education sector.

• Governments need to ensure adequate national education budgets to, among others, address infrastructure, human resources, financial and administrative constraints. Adequate and predictable international support for education should be provided. Donors need to live up to past promises. In addition, innovative sources of education financing, South-South cooperation, triangular cooperation and new partnerships need to be explored to close the education financing gap.

• There is a need to redouble efforts to provide access to education in emergency situations for all affected populations.

Education Quality

• All stakeholders should work together to ensure quality education, reduce drop-outs, repetition and failure rates by establishing child-friendly schools with relevant curricula, and adopt active and cooperative pedagogic approaches and learning and teaching materials that are gender sensitive. The capabilities of information and communications technology should be harnessed, in particular for those outside the formal education system.

• There is an urgent need to increase the number of teachers and enhance the quality of their teaching through comprehensive cross-sectoral policies that address issues of recruitment, pre-service and in-service training, retention, professional development, evaluation, employment and teaching conditions, as well as teacher status.

• School conditions should be enhanced by building more classrooms and improving the conditions of school buildings and infrastructure, including by prioritising investment in head teachers and school administrators. Particular attention should be paid to providing sanitary and other facilities for girls, thus removing one of their key obstacles.

Stakeholders in Education

• Governments bear the primary responsibility for providing an appropriate framework for realising the right of everyone to education. Through innovative approaches, the private sector and civil society can assist in providing access to education for the hard to reach.

• There is a need to engage the private sector to facilitate the transition from basic education, vocational training, higher education and non-formal education into the labour market.

• Quality, accountability and transparency should be promoted through better involvement of parents and communities in the running of schools.

Closing Plenary Session

New Perspectives for WISE

Keynote Speaker

Prof. **Jeffrey Sachs**, Director of the Earth Institute, Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University; Special Advisor to United Nations Secretary-General Ban Ki-moon (USA)

Summit Overview Panel

Mr **Martin Burt**, Founder and CEO, Fondación Paraguaya (Paraguay)

Mrs **Vicky Colbert** Founder, Escuela Nueva (Colombia)

Mr **Steen Jorgensen**, Sector Director for Human Development, MENA Region, the World Bank (USA)

Moderator

Mr **Mike Baker**, education journalist, broadcaster and author (UK)

Closing Speeches

H.H. **Sheikha Moza bint Nasser**, Chairperson, Qatar Foundation

H.E. **Sheikh Abdulla bin Ali Al-Thani**, PhD, Chairman, WISE, Qatar Foundation

Master of Ceremony

Ms **Nima Abu-Wardeh**, journalist and broadcaster, presenter of BBC World's Middle East Business Report (UAE)

Prof. Jeffrey Sachs

Keynote Address (by live satellite link from the USA)

I want to congratulate WISE for its leadership not only in education but in innovation in education, because the commitment to education and to bringing new technologies to bear on it are what makes its contribution so powerful. The Millennium Development Goals (MDGs) are suffused with education and one could say that it is at the core of the MDG agenda. MDG2, of course, is about obtaining universal access to primary school education for the 100 million children who currently do not have it, and MDG3 focuses specifically on gender equality. Education is key to functioning adequately, to being good citizens and to being productive in the labour force, and every society faces the challenge of ensuring a quality education for all citizens.

Education is not simply a short stage of life, but is lifelong. Real education and the ability of any individual to develop starts before the school age. A safe environment and good cognitive development are crucial even before formal education starts in order for every child to reach their potential. Furthermore, those without primary education are more likely to be condemned to poverty. However, primary education is no

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longer enough. In the knowledge economy of today, at least a secondary education is necessary, and I would have included it in the MDGs.

So we need to ensure kids get into and through primary education and secondary education is also crucial, especially for young girls. Even this is not enough, because higher education is essential for rich and poor and every society needs to create its leaders through quality higher education. Furthermore, education must now be a lifetime goal, enabling us to understand the rapidly changing world around us. Therefore, what WISE is championing is at the heart and soul of sustainable development. Innovation is essential, because we need to be able to bring the new technologies to bear on innovative and creative education. Education should be central to the global sustainable agenda in order to achieve the MDGs and to create a world of prosperity and peace for all.

What WISE is championing is at the heart and soul of sustainable development.

Summit Overview Panel

Mike Baker: Where do social entrepreneurs come from, and how do we encourage them to become involved in education?

Vicky Colbert: Social entrepreneurs start where there are pressing needs. You need to have good innovation, strategies to make it scalable, and an ethical outlook. In Colombia, we were able to bridge the gap between local innovation and national policies. WISE is a catalyst in the education sector, creating a platform for us to share these ideas.

Mike Baker

Mike Baker: What have you taken from these last few days about how we can move forward in terms of public-private partnerships?

Martin Burt: We have to reconsider the private sector, but not only business. There are also civil and mission-driven organisations that can act as the drivers. There has to be more South-driven cooperation. This platform can be a space where these new partnerships begin.

Mike Baker: What are the key ideas that have emerged about funding?

Steen Jorgensen: Many governments are following Qatar's leadership in not cutting funding. Another thing is that parents continue to fund education in these hard times, and that puts pressure on us. We need both to raise funds and to spend those funds wisely.

Mike Baker: How can regional and international cooperation help countries that lack resources?

Vicky Colbert: Countries cannot do things by themselves. Regional organisations can help share evidence and build and promote policy.

Mike Baker: What can we do in terms of teacher quality?

Steen Jorgensen: Training teachers in a supply-driven way will not do if we are concerned with quality. We need to attract the best people, retain them and motivate them.

Mike Baker: What have you gathered about open-source learning materials from the Breakout Sessions?

Martin Burt: We need to do impact evaluation, because we really do not know how IT is used and its impact.

Mike Baker: What role does education have in post-conflict societies?

Vicky Colbert: We have evidence from Colombia of how collaborative learning impacts on peaceful behaviour.

H.H. Sheikha Moza bint Nasser
New Possibilities

People in the Arab world can become important players on the international stage if they are well-prepared and given opportunities to prove themselves. WISE is a very important launching pad for this, allowing us all to support innovative projects. I especially ask the private sector to place these projects high on their list of priorities. WISE can help in the task of achieving the Millennium Development Goals (MDGs) and the "Education for All" objective, and enhance the aims of the UN's Alliance of Civilizations.

We have heard a number of constructive ideas based on academic knowledge and experience, and this experience, if properly used, will open up new possibilities for a better, high-quality approach. I urge you to find new solutions to educational challenges from now and even beyond 2015, and for WISE to continue searching for realistic solutions in order to achieve the goal of education for all and expand the wealth of intellectual knowledge.

WISE can help in the task of achieving the Millennium Development Goals (MDGs) and the "Education for All" objective, and enhance the aims of the UN's Alliance of Civilizations.

H.E. Sheikh Abdulla bin Ali Al-Thani, PhD
Outcomes

WISE is about outcomes above all. We would like to know more about the many interactions which have taken place and their results, and will soon have an enhanced website for this purpose.

Rebuilding the Haitian educational system is a major challenge, but it is also an opportunity to seek innovative methods of doing so. WISE held a special session on this subject and calls for a task force consisting of international partners to look at the situation and report back with a concrete action plan. Furthermore, WISE will publish a reference guide to the many achievements and initiatives in education internationally.

It is a great privilege to announce the creation of the WISE Prize for Education to honour those who have made outstanding contributions to education. Up to now there has been no major prize of this kind. Nominations will be invited from 1 February and, after initial screening, the final selection will be passed to a jury of five individuals. The prize, $500,000 (US) and a gold medal, will be awarded at the 2011 WISE Summit.

Thank you to our institutional and media partners, moderators, speakers and many others. The next WISE Summit will take place in Doha, Qatar, 1-3 November 2011.

It is a great privilege to announce the creation of the WISE Prize for Education.
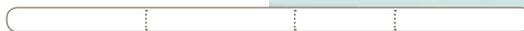
Announcing the WISE Prize for Education

In the Closing Plenary Session of WISE 2010, the creation of the annual WISE Prize for Education was announced by H.E. Sheikh Abdulla bin Ali Al-Thani, PhD, Chairman of WISE. This is the world's first major international prize for education. It was established to honour individuals or teams who have made an exceptional contribution to any field or level of education. It aims to focus international attention on a pinnacle of achievement and the crowning importance of education for the future of our world and civilisations. The Laureate will be revealed at the 2011 Summit and will receive an award of $500,000 (US) and a gold medal.

Meanwhile, the WISE Community is invited to support this new initiative by participating in the nomination process. Nominations will be accepted from 1 February to 30 April 2011.

For more details of this premier tribute, go to: www.wiseprizeforeducation.org

"The establishment of the WISE Prize for Education demonstrates our determination to accelerate the development and transformation of education by bringing to light the most eminent leaders and drawing the world's attention to their outstanding contributions in a spirit of competition. This new prize is a milestone in the development of international education. While other major international prizes celebrate such disciplines as physics, chemistry, economics or peace, there has until now been none for education, which is a prerequisite for achievement in all those areas. It is our aim that this prize should raise global awareness of the crucial role of education in all societies, and create a platform for innovative and practical solutions that might help alleviate some of the challenges which education faces around the world."

Her Highness Sheikha Moza bint Nasser
Chairperson of Qatar Foundation

wise
prize
for education

an initiative of مؤسسة قطر
Qatar Foundation

Choosing the Laureate

Nominations will be screened by an 11-person WISE Prize Committee which will make a pre-selection of no more than 15. A Jury of five distinguished individuals will consider the 15 final nominations and select a winner.

The Jury
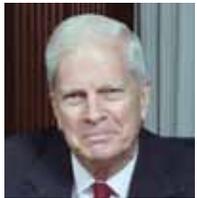
Dr James H. Billington, *Librarian of Congress, USA*

James Hadley Billington has served as the Librarian of Congress since September, 1987. He was born in Bryn Mawr, Pennsylvania, and educated in the public schools of the Philadelphia area and at Princeton University. He earned his doctorate from Oxford University, where he was a Rhodes Scholar. Following service with the U.S. Army, he taught history at Harvard University from 1957 to 1962 and subsequently at Princeton University where he was professor of history from 1964 to 1973. From 1973 to 1987, Dr Billington was director of the Woodrow Wilson International Center for Scholars.

Mrs Naledi Pandor, *MP, Minister of Science and Technology, South Africa*

Naledi Pandor is South Africa's Minister of Science and Technology. She received a BA degree from the University of Botswana and Swaziland, an MA in Education from the University of London, and an MA in Linguistics from the University of Stellenbosch, South Africa. Pandor was elected to parliament in 1994 and served as deputy Chief Whip of the African National Congress (ANC) from 1995 to 1998. She was Chairperson of the National Council of Provinces from 1999 to 2004. Pandor became Minister of Education in 2004, and assumed her current position in 2009.

H.E. Sheikh Abdulla bin Ali Al-Thani, PhD, *Chairman of WISE, Qatar Foundation, Chairman and member of the Jury*

His Excellency Sheikh Abdulla bin Ali Al-Thani is Vice President, Education, at Qatar Foundation where he serves as President of Hamid Bin Khalifa University. He is also Chairman of the World Innovation Summit for Education (WISE), the leading global forum for innovative practice in education. Named a Young Global Leader by the World Economic Forum, Dr Al-Thani is active in educational reform in the Arab world. He serves on the Executive Council of the World Digital Library at the Library of Congress in Washington, and on the Governing Board of the UNESCO Institute for Lifelong Learning in Hamburg.

Prof. Jeffrey D. Sachs, *Director of the Earth Institute, Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University; Special Advisor to the United Nations Secretary-General (USA)*

Jeffrey D. Sachs is the Director of the Earth Institute, Quetelet Professor of Sustainable Development, and Professor of Health Policy and Management at Columbia University. He is also Special Advisor to United Nations Secretary-General Ban Ki-moon. He has been Director of the UN Millennium Project and Special Advisor to UN Secretary-General Kofi Annan on the Millennium Development Goals, and President and Co-Founder of Millennium Promise Alliance. He is widely considered to be the leading international economic advisor of his generation.

Mrs Fatma Rafiq Zakaria, *Chairman of the Maulana Azad Educational Trust, India*

Fatma Rafiq Zakaria is Chairman of the Maulana Azad Educational Trust in Aurangabad, India, which offers quality education to the less privileged. Her career has spanned diverse fields including journalism, social work, publishing and education. She is also editor of The Taj Magazine and President of the Maharashtra College of Arts, Science, Commerce & Computer Science in Mumbai. Mrs Zakaria won the Sarojini Naidu Integration Award for Journalism in 1983 and, in 2006, the prestigious Padma Shri, awarded by the President of India, for her work in education.

WISE 2010 New Features

Day 1

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Spotlight Sessions
2010 WISE Awards Laureates

Workshop
Rebuilding the Education System in Haiti: A Case Study *(see page 32)*

Workshop
Sustainability in Educational Institutions

Day 2

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Spotlight Sessions
2010 WISE Awards Laureates

Special Session
Programme for International Student Assessment (PISA) Announcement

Her Excellency Sheikha Al Mayassa bint Hamad bin Khalifa Al-Thani addressed the first TEDWomen conference in Washington, D.C. via satellite from Doha, in a session entitled Harmony and Discord: the Role Women Play in Peace and Security.

Workshop
Nurturing Every Seed: Using System-Level Transformation to Improve Education

Workshop
Monitoring and Evaluating the Use of New Technologies
(see page 84)

Workshop Education 3.0 Leading Indicators Diagnostic

Day 3

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Spotlight Session
WISE Learners' Voice *(see page 56)*

Spotlight Session
Design for Change Contest 2010 *(see page 100)*

Special Session
Education Millennium Development Goal (MDG2)
(see page 128)

Special Session
ECOSOC-AMR Regional Preparatory Meeting
(see page 140)

www.wise-qatar.org