7th Annual Mobiles for Education Alliance Symposium | 2017
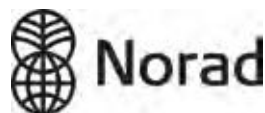
Future-Proofing Technology for Education in International Development

October 5-6, 2017, Washington, D.C.

TABLE
OF
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mEducation Alliance Steering Committee

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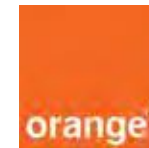
Overview

"In raising the learning gains of today's students, we firmly believe we are future-proofing society, paving the way for the education of the next generation." **Sarah Hawkes, Bid Manager, International Business, Whizz Education**

"In a relatively short period of time, I was exposed to large number of innovations and able to connect with many organizations with potential to partner with. The setting was very conducive to such learning and partnership development." **Leonardo Hosh, Senior Director, Child Development and Protection, World Vision**

"Exciting to see a new generation of experts providing innovation and new ways of imparting knowledge through e-technology." **Paul Gibbings, Independent Consultant for Textbook Publishing, Production and Distribution**

The seventh annual Mobiles for Education (mEducation) Alliance Symposium, held October 5-6, 2017, brought together practitioners, thought leaders, policy makers, and funders to advance the use of and evidence for information and communications technology in global education (ICT4E). Each year, the Steering Committee of the Alliance designs the Symposium to promote a shared understanding of the opportunities and challenges of implementing ICT4E solutions particularly in lower-resource, developing country contexts. The event is designed to promote networking and partnership development among participants, who come from government, nonprofit, and private-sector organizations.

The guiding theme of this year's Symposium, "Future-Proofing Technology for Education in International Development" demonstrated the power of this gathering to discuss pathways to spread and scale promising technology for education interventions. Presenter and participant discussions underscored the importance of gathering evidence of impact to advance adoption and spread of the most impactful of these innovations.

The future-proofing theme was embedded into a novel Symposium application process: Prospective presenters were asked to submit proposals for presentations in which they would time-travel three years into the future. The presenters would retrace the future-proofing steps taken by 2020 to conceive, launch, and successfully sustain the project being described. Presenters selected were then encouraged to articulate how their projects were "future-proofed" from inception to implementation to scale at local, national, and/or global levels.

The featured projects demonstrated how piloting, research, evidence, technology selection, and partnerships yielded innovative projects with the promise of durability and growth.

The future-proofing theme helped presenters and participants envision pathways to implementing evidence-driven innovations at scale. The longer term vision is that this focus on sustainable, durable project designs would lead public sector policy makers to adopt and support such innovations in their countries.

"Know where you're starting, in order to know where you want to go."

Hunada Kanbar, Education Advisor, Ministry of Education, United Arab Emirates

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318	Symposium Attendees
156	Organizations Involved
150	Presentations
33	Presenters' Countries of Origin

mEducation Alliance

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"It provided me with fresh ideas about using mobile technology in education especially in developing countries. It wove together experienced individuals from across the world whose contributions from the ground in their local communities was meaningful to strengthening my understanding of using and experimenting with mobile technologies in education." Andrew Benson Greene, Founder, B-Gifted Foundation

Since 2011, the mEducation Alliance has served as a convening platform for collaborative efforts to catalyze international contributions and support for the identification, research and evaluation of a broad range of technologies to significantly impact improvements in quality education delivery, particularly in developing countries.

The Alliance, is guided by Steering Committee composed of representatives from its 23 member organizations.

The Alliance is committed to supporting the sourcing, identification, and applications of ICT4E that can be effectively leveraged to address pressing educational issues including: basic and higher education content provision, system strengthening (such as data collection), accessibility for learners with disabilities, professional development for educators, and workforce development.

By helping to identify, raise awareness about, evaluate, and connect partner opportunities for promising mEducation initiatives, the Alliance plays a pivotal role in international and national efforts to increase learning outcomes for learners in traditional and non-traditional settings.

The 150 presentations covered ICT4E initiatives being implemented in 41 countries.

India 25
Kenya 15
Uganda 8
Zambia 7
Nigeria 6
Cambodia 6
Philippines 6

4
Jordan
Ghana
Afghanistan
USA
Haiti
South Africa
Tanzania

3
Dem. Rep. of Congo
Indonesia
Nepal
Morocco
Mali
Malawi
Lebanon

2
Rwanda
Ethiopia
South Sudan
Mexico
Pakistan

1
Liberia
Thailand
Nicaragua
Yemen
Laos
Peru
Cameroon
Kyrgyzstan
Russia
UAE
Chad
North Iraq
North Iraq
Sri Lanka
Myanmar

Symposium Themes

The Symposium's primary theme of "future-proofing" invited presenters to share their strategies for building sustainability and scale into their initiatives.

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"I was impressed with the collaboration of government entities across the world, private-public partnerships, and the level of expertise and candid conversation building." **Manuel Pereira Colocci, U.S. Department of State**
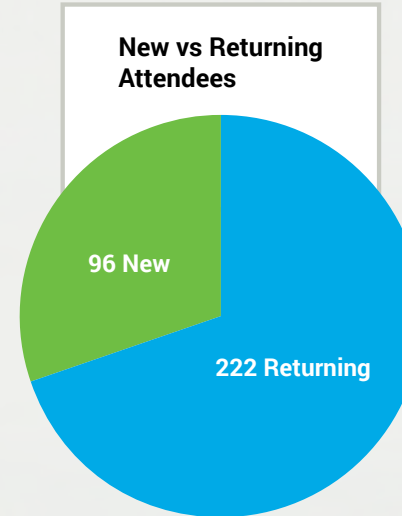
"I expected to get some inspiration. In fact, I got a lot of inspiration! I learned some practical solutions to problems we face at our organization." **Paulína Koršňáková, Senior Research and Liaison Advisor, International Association for the Evaluation of Educational Achievement**

Symposium Sub-themes and Presentation Formats

The sub-themes for this year's Symposium included: literacy, monitoring and evaluation (M&E), girls' education, education for people with disabilities, and innovative methods for providing nonformal and lifelong education to out of school children and adults. Through this cross-disciplinary exploration of ICT4E solutions, presenters addressed some of the most salient issues in global education today.

Presenters utilized a variety of interactive formats including:

- **Gallery Walks:** Exhibit-style presentations which included posters and hands-on demonstrations. Audience members, gathered in small groups around gallery "stations" where then invited to rotate to other "stations" every 15-20 minutes.

- **Lightning Presentations:** 7-minute talks enhanced by interactive media followed by 8 minutes of Q&A with the audience.

- **Case Study Presentations:** Focused deep-dive presentations on Learning at Scale and Learning Analytics for the Global South.

- **Interactive Panels:** Themed presentations on topics as diverse as the Global Digital Library and Future-Proofing Professional Development.

- **Spotlight Presentations:** Examinations of particular trends or challenges, such as Girls' Education Challenge and Using Data and Measurements.

- **Technology Demonstrations:** Hands-on presentations on technology-leveraged activities.

- **mEducation Alliance Steering Committee Spotlights:** Detailed views of selected activities of mEducation Alliance Steering Committee organizations.

New vs Returning Attendees

96 New

222 Returning

Technologies Featured in Symposium Presentations

137	Smartphone
71	e-Reader/Tablets
119	Laptops
78	Audio/Visual Devices
1	Chromebooks
1	MP3 Players
88	Wireless Networking
50	Flash Memory
3	Solar Chargers
2	Sim Cards
28	GPS Navigation
44	Micro-Projectors

Literacy

The READ project in Bangladesh developed an Android-based app app that enables classroom teachers to conduct assessments in under ten minutes per child.
Credit: Shyamal Kanti Singha Roy, RDRS Bangladesh

> *"Three steps forward: one step back. The evidence that the use of same-language-subtitling by Planet Read supports functional literacy acquisition in India is so strong that they cannot ignore it anymore. The evidence base has been critical in engaging the government."* **Brij Kothari, Schwab Social Entrepreneur and Ashoka Fellow Faculty, Indian Institute of Management, Founder, PlanetRead and BookBox, Literacy for a Billion**

According to the World Bank, 125 million children worldwide are failing to acquire functional literacy and numeracy skills. This figure includes youth who have spent at least four years in school. Furthermore, United Nations estimates 103 million children worldwide lack even the most basic literacy skills. The literacy and numeracy technology initiatives presented at the Symposium represented an eclectic set of classroom-based and non-formal applications—from pop-culture programming to mobile-based tutoring programs.

Curious Learning develops, localizes, and distributes open-source literacy apps in local languages to anyone with a mobile device.
Credit: Pierre Tostee, MRP Foundation

India

In India, where a half-billion officially "literate" people lack the ability to read a newspaper, a novel initiative combines the power of Bollywood with the omnipresence of screens. **PlanetRead** and **BookBox** apply same-language subtitling (SLS) to televised Bollywood movie soundtracks and children's cartoons. Studies show measurable reading improvements among young viewers, and "heatmap" studies show viewers focus on the lower part of the screen. The goal is to use SLS for every Indian music video and TV program, and then launch the program in other countries.

PlanetRead along with the Indian Institute of Management, Ahmedabad pioneered the SLS initiative with the aim to transition over 300 million people in India, from a state of early-reading, to functional and fluent reading ability.

Global

The Enabling Writers Workshop Program (EWWP), funded by the **All Children Reading: A Grand Challenge**

Impact of SLS on illiterate students

Credit: PlanetRead

900 Million Viewers

Credit: PlanetRead and BookBox

for Development partners (USAID, World Vision, and the Australia Government), supports the design and implementation of workshops to train authors to produce high-quality, level-appropriate, local language children's books using Bloom software. Implemented by **University Research Corporation LLC**, the EWWP supported training activities with institutions in six countries. Collectively, partners—**American University of Nigeria**, **University of San Jose-Recoletos** (Phillippines), **Yayasan Sulinama Foundation** (Indonesia), **Library for All** (Haiti), **Dhaka Ahsania Mission** (Bangladesh), and **World Education** (Nepal) —have developed 2,700 titles in eleven languages to date. All materials will be downloadable and are open license to allow sharing, electronic use, and large-scale printing. These and other titles will be accessible on the Bloom Library and through the **Global Digital Library**.

Credit: REACH EW Philippines

Monitoring and Evaluation (M&E)

Using fully disaggregated data on a national scale is the foundation to inclusive school enrollment and attendance in South Sudan.
Credit: Charlie Goldsmith Associates

"Sharing all results from our M&E system provides for discussion, debate, and adaptation within the system, not just within the program." **Anne Smiley, Technical Advisor, FHI 360**

More girls are going to school in South Sudan as a result of SMS attendance reporting and cash transfers introduced by the GESS project.
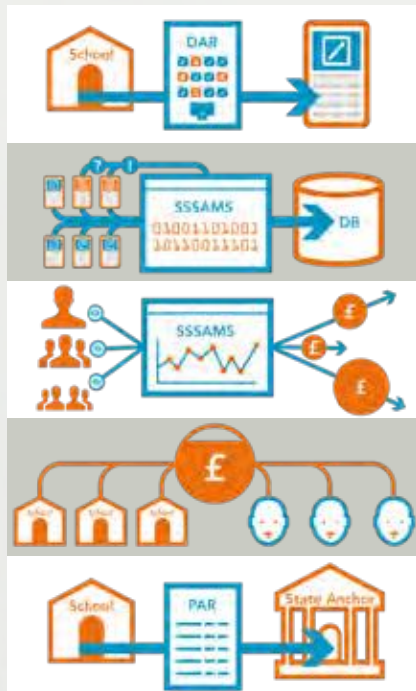**Credit: Andrea Câmpeanu**

Any educational outcome that can be measured through data can be tracked with greater immediacy—and often with higher accuracy—with the assistance of ICT-enabled tools. The impacts of mobile data gathering and reporting initiatives on attendance, student performance, and instructional effectiveness are wide ranging. Mobile-based M&E initiatives can spur societal transformation, prioritizing the education of marginalized youth. Projects can also be as small and localized as a single community's efforts to better train its teachers. The 2017 Symposium featured projects that incorporated mobile-supported M&E that ranged in scope from equalizing

educational access for girls in South Sudan, to allowing localities in Nigeria to set benchmarks and monitor interventions. The projects leverage technologies as simple as short message service (SMS), as transformative as instant cash payments, and as experimental as biometric fingerprinting.

South Sudan
Credit: Lee Crawford, Center for Global Development and University of Sussex

The Girls' Education South Sudan (GESS) project, implemented by Charlie

Credit: Helen Lundebye

Goldsmith Associates, Ltd., leverages mobile technologies for both tracking and rewarding girls' attendance in 3,300 schools. Every day, through the Ana Fii Inni, I Am Here system, teachers record attendance and enrollment of 1.4 million students across South Sudan. The teachers are paid based on whether they take attendance with their mobile phone, and send it via SMS to the database number. The program makes cash transfers to teachers who take attendance and sends the data via SMS to to be captured in a database and to families whose children attend school. As a result, in the area covered by the program, the number of girls in school has increased significantly.

Zambia

In rural communities in Zambia, the **Center for Education Innovation's eSchool 360** combines biometric fingerprinting for student attendance with a system of coaching and development for teachers. In a technology partnership with **SimPrints**, eSchool 360 has piloted in two schools the first-ever fingerprinting program to be used in a global development education setting. To ensure that schools maintain accurate attendance records, students scan in their fingerprints each day. The data is fed to the cloud, enabling immediate school-attendance data and reporting. Data is reported back to teachers at the end of each week, along with prompts to check in with absent students.

Nigeria

In Nigeria, **FHI 360's** ICT4E initiative is building the capacity of the local governments in Katsina and Zamfara states to run the monitoring, coaching and reporting system.

This activity is being Implemented as the **Reading and Numeracy Activity (RANA)** pilot project, which is funded by the Department of International Development through UNICEF.

Supported by FHI360-trained coaches, state authorities work with local schools to set goals and objectives. Project coaches in Nigeria visit each school and each grade on a regular schedule, and use an Android device and Open Data Kit software to collect and upload data. Project staff in the United States clean and analyze the data, and then publish it to online dashboards—where school leaders can access reports and target performance gaps weekly for in-school coaching.

The British Council EDGE (English and Digital for Girls' Education) Odyssey program helps adolescent girls in socioeconomically marginalized communities to develop digital, English proficiency and 21st Century skills in India, Bangladesh, and Nepal.
Credit: British Council

Girls from 10 Ethiopian high schools got a boost in their internet and technology skills from the Girls Can Code Project, a 30-week course designed to give them the hands-on skills and confidence they need to pursue computer science at the university level.
Credit: WiderNet Field Associate Mulugeta Assefa

Girls' Education

According to UNESCO estimates, 130 million girls between the ages of 6 and 17 are out of school, and 15 million girls of primary-school age—half of them in Sub-Saharan Africa—will never enter a classroom. Globally, girls are twice as likely as boys to be among that latter category of never receiving any schooling at all. Even more troubling, worldwide figures for illiteracy among women and girls are largely unchanged since 2000. Initiatives targeting girls' education, which were presented at the Symposium, approach the problem from various angles: Some emphasize mobile and other internet technologies as conduits for universal access to education, while others leverage ICT selectively to empower specific groups of marginalized girls.

Kenya

Project iMlango is a comprehensive educational technology program delivered by a ground-breaking partnership of public and private sector organizations, which aims to improve Kenyan pupils' learning outcomes, enrollment and retention. **Avanti** and **Squid**, two of the project partners, highlighted their work in improving educational outcomes for over 68,000 girls in highly marginalized rural regions of Kenya. While iMlango serves a total of 150,000 male and female students, the project's special focus on measuring and improving girls' education outcomes derives from iMlango's partnership with **Ministry of Education in Kenya**. Among the project's key findings: Over 60 percent of the girls served became more interested in school because of the digital learning methods used. Among iMlango's innovations is the platform's mobile app for numeracy, which significantly accelerated students' math progress. Other important project outcomes include improved student attendance overall and higher levels of teacher engagement.

South Asia

The English and Digital for Girls' Education (EDGE) Odyssey program develops English proficiency and 21st-century skills for South Asian adolescent girls in socioeconomically marginalized communities, via non-formal, peer-led, after-school clubs. With a primary focus of social and developmental support for the 17,000 young women who have participated across 747 clubs. The British Council-led program, which aims to build self-confidence and raises community esteem for participants, provides social and emotional support and teaches technology and communications skills.

Credit: British Council

Disability

> *"They [visual impaired children in Philippines] are unique, they have their own talents, they have their own abilities, and they can share their information, knowledge and skills to other children in regular schools."* **Amy Mojica, Executive Director, Resources for the Blind, Inc.**

The estimated 93 million children with disabilities worldwide are an especially vulnerable population: Across the board, they are less likely to attend school--and far more likely to face discrimination if they do go to school. What is more, teachers often lack the training to fully support children with disabilities. Symposium projects addressing the special challenges of students with disabilities showcased the versatility of technology-leveraged solutions for teachers' professional development, visual and hearing impairment screening, and sign language instruction. Also spotlighted was a unique approach to technology skills training for students with Autism Spectrum Disorders (ASD).

Morocco and Uganda

In Morocco and Uganda, projects seeking to promote and universalize the use of sign language are gaining traction through cloud-based and mobile technologies. In Morocco, most deaf children never gain basic literacy skills. **The Institute for the Research of Disabilities and Training, Inc.** is ensuring that a cloud-based dictionary for Moroccan Sign Language, which has until recently barely been documented, is now being used to bring literacy instruction to Morocco's deaf population. In Uganda, the aim of the **Digitalizing Ugandan Sign Language (UgSL)** Project, implemented by **Uganda National Association of the Deaf**, is to make UgSL learning accessible through cross-platform digital content, including learning platforms and formal school curriculum, social media, and libraries. The vision is to remove barriers and make UgSL accessible to all Ugandan citizens, not just the deaf.

Kenya

Through **Project Autistech**, implemented by **Strathmore**

> **"The program began when a parent of an autistic student came to us and said, My son is good at computers and could be good in the IT sector."**
> Regina Nkonge, Digital Learning Manager

University, a business and technical-training institution in Nairobi, Kenya, partners with local secondary schools to help individuals with ASD prepare for jobs in software testing and quality assurance. It is a field in which people with ASD are known to excel. By helping young people with ASD train for technology jobs in which they can shine, Project Autistech is boosting students'

> **"We wanted to give the students different aspects of IT, so they could choose what they are passionate about."**
> Tracy Weru, Program Coordinator, @iLabAfrica Research Centre

self-confidence, helping them get employment, and nurturing workplace coping skills.
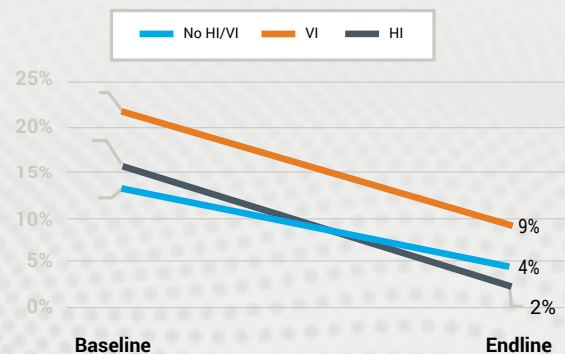
Ethiopia

In Ethiopia, there are 71,000 children going to school under new disability rights laws. The goal of this project was to provide foundational skills to teachers, to create a more inclusive environment. **RTI International**, funded by USAID, launched the **Reading for Ethiopia's Achievement Developed Technical Assistance (READ TA) Project**, which was designed to improve reading instruction for Grades 1-8 through the use of mobile-based classroom screening technology and inclusive, multimedia lesson plans for teaching reading instruction for Grades 1-8, **RTI International** launched a proof-of-concept project to advance mobile-based classroom screening technology and inclusive, multimedia lesson plans for teaching reading. Through hearing and vision tools deployed on mobile phones, screenings revealed 5.3 percent of children had a visual impairment and 4.9 percent had a hearing impairment. Specially designed lesson plans in the pilot schools have also resulted so far in a significant reduction in very low reading scores.

The chart below shows results from the project, which achieved a notable reduction in zero scores for reading correct letter sounds per minute (CLSPM) for all children; and an even larger reduction in zero scores for children with a visual impairment (VI)/) or a hearing impairment (HI).

Reduction in Zero Scores (CLSPM), all languages

Sample size: no VI/HI n=328/296; VI n=218/166; HI n=180/162 READ TA Project/USAID and RTI International

Since 2016, Libraries Without Borders has
been providing support to Burundi's university
network by equipping several cultural centers
throughout the country with Koombook digital
library kits.
Credit: Libraries Without Borders

Non-formal Education and Lifelong Learning

According to United Nations estimates, about 781 million adults over the age of 15 are illiterate—and nearly two-thirds of them are female. A vast majority of illiterate adults worldwide were forced to leave school for reasons of economics or gender. Individuals who missed out on schooling tend to lack not only literacy, but also basic numeracy and work-related skills. These adolescents and adults need support and services that fit into their daily lives—and their needs vary widely, depending on the age at which they left school.

The Symposium's thematic emphasis on Non-formal Education and Lifelong Learning featured presentations showcasing mobile-based approaches to language literacy, numeracy, and employment-related skills. Featured projects offered powerful examples of mobile learning addressing the needs of adult and young learners, through flexible, bite-sized, and socially connected instruction.

Kenya and Nigeria

Cell-Ed, a provider of mobile-based courses and coaching, applies the mLearning model to help adult learners in Kenya, Nigeria, and other developing nations. The focus is on enabling fast gains in literacy, numeracy, and work-related essential skills. Cell-Ed courses are offered via two-way texting and audio: Learners call in to access materials on their mobile phones, then text their answers to questions asked during the course. Courses are available 24/7, and live coaches provide learners with needed support and scaffolding. The strengths of the Cell-Ed program lie in its on-demand flexibility and learner-controlled pacing. Post-test results show 75 percent retention of material after four months, and learners show significant improvement (an average of one letter grade) from pre-test to post-test. Cell-Ed has plans to scale its mobile learning project globally, building partnerships with local network providers to control data costs.

Nicaragua

Aimed at increasing access to technical education and careers for youth on Nicaragua's Caribbean Coast, the **Aprendo y Emprendo** project, which is implemented by **Creative Associates**, works in an isolated region with few education and economic opportunities. This program, which used Small, Private, Online Courses (SPOC) to help students learn leveraged tools such as Webex, What's App, and free website buiding tools to help students learn, achieved 94 percent retention rate after the first course.

Conclusion

The 2017 mEducation Alliance Symposium offered mobile-learning and ICT leaders from across five continents the chance to share their stories of innovation, partnership, scaling, and real, measurable impacts. For conference attendees, the takeaways went much deeper than lists of best practices, ed-tech trends, or mobile solutions for developing countries.

The Symposium inspired participants with stories of transformative ICT skills-training projects. A common theme was technology training that intersected with the needs of particularly vulnerable learners—young women, students with disabilities, and refugees. Some of these stories of training and preparation featured girls from socially marginalized communities gaining computer skills through after-school clubs, teenagers with developmental disabilities taking college-level IT classes, and young adults in refugee camps getting connected with higher-education mentors and tutors.

Other Symposium narratives involved technology creators sharing the power and impact of their tools. Initiatives such as open-source app frameworks for creation of local language content, a handbook on the creation of educational games for literacy, and the expansion of open educational resource libraries spotlighted the importance of educational changemakers as framework architects, template-builders, and open-source leaders.

A broad range of "mobile" applications played a starring role in most of the global narratives presented. Symposium presenters shared a stunning range of applications--including lesson-delivery vehicles, adaptive math tutoring systems, app-based serious games, real-time classroom assessment tools, options for accessible learning, and a micro-payment platform to incentivize girls' education.

The 2017 Symposium's focus on "future-proofing" meant that these stories of applications of mobile technology and training sought to go beyond meeting the most urgent educational needs or helping the most vulnerable learners.

They were all united by the pressing challenge of how to design for local ownership, long-term feasibility, and lasting impact. While educational challenges faced in developing country context are daunting, the technology-leveraged models presented shattered common notions of developing countries' infrastructure limitations, development constraints, and readiness to embrace web-based systems of education. As presenter Allister Chang of Libraries without Borders observed, "For us to be in this work, we have to be short-term pessimists and long-term optimists." The short- and long-term visionaries and conversations featured at the Symposium provided a unique space for information exchange and forming new partnerships. As event organizers, we'll be excited to see which of these have built sustainable and impactful initiatives by 2020.

For more information
about the 2017 mEducation
Alliance Symposium presenters
and their presentations,
please see the
www.meducationalliance.org
website.