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THE 2012 mEDUCATION ALLIANCE INTERNATIONAL SYMPOSIUM: PARTNERING FOR SCALE AND IMPACT

SUMMARY REPORT



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2012 mEducation Alliance International Symposium: Partnering for Scale and Impact

Summary Report

January 2013

Prepared by

The Aguirre Division of JBS International, Inc.

Cover images first row, left to right, courtesy of: Stanford Mobile Inquiry-based Learning Environment (SMILE), Paul Kim; 2012 mEducation Alliance International Symposium, mEducation Alliance; Linda Raftree. Second row, left to right, courtesy of: SMILE, Paul Kim; E-xample “Mi Compu”, Daniel Adrião; SMILE, Paul Kim.

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List of Abbreviations

CRS	Catholic Relief Services
EDC	Education Development Center, Inc.
EGRA	Early Grade Reading Assessment
GPS	Global Positioning System
GSMA	GSM Association
IDB	The Inter-American Development Bank
IESC	Intel Education Service Corps
iOS	Internetwork Operating System
IRI	Interactive Radio Instruction
ISTE	International Society for Technology in Education
ITU	The International Telecommunication Union
mEducation	The Mobiles for Education community
mLearning	The Mobiles for Learning field
MoE	Ministry of Education
mYWD	Mobiles for Youth Workforce Development
NASA	National Aeronautics and Space Administration
NGO	Non-Governmental Organization
NVDA	Non-Visual Desktop Access
PC	Personal Computer/Computing
RTI	Research Triangle Institute International
SD Card	Secure Digital Card
SIL	SIL (formerly Summer Institute of Linguistics) International
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNICEF	The United Nations Children's Fund
USAID	U.S. Agency for International Development

Introduction

On September 5th and 6th of 2012, USAID hosted the second annual Mobiles for Education (mEducation) Alliance International Symposium in Washington, DC. The event focused on partnership building to improve the scale and impact of initiatives that use mobile technologies for education. Some 200 participants from more than 35 countries attended. Participants came from diverse backgrounds and included representatives from some of the most prominent donor agencies, government organizations, highly respected NGOs and foundations, a vetted pool of project implementers, professional associations in both educational and mobile technology, and private sector organizations.

USAID, Aguirre/JBS International and the mEducation Planning Committee collaborated and worked diligently to create a highly interactive event designed to maximize attendee participation through interview-style presentation formats, open sessions, and networking activities. The mEducation Planning Committee consisted of representatives from 18 institutions and organizations including: USAID, The World Bank, UNESCO, UNICEF, The Inter-American Development Bank (IDB), U.S. Department of Education, U.S. Department of State, International Society for Technology in Education (ISTE), World Vision, World Wide Web Foundation, GSMA, The MasterCard Foundation, Peace Corps, British Council, Global Partnership for Education, JBS International, Alcatel-Lucent, and University of Wolverhampton. The Planning Committee is grateful to Symposium sponsors Alcatel-Lucent, British Council, and Intel. After determining the focus of this year's Symposium, the Planning Committee drafted and released a public call for proposals to initiate a competitive selection process for the most relevant and cutting-edge presentations. Applicants were invited to submit proposals for presentations, open sessions, demonstrations, or posters. The committee received more than 60 proposals from 64 institutions and organizations. Proposals were randomly divided into four groups that were judged independently by 15 members of the Planning Committee. Proposals were reviewed using a Likert scale and ranked according to the following categories:

- Relevance to Symposium theme and goals;
- Application of mobiles for education in developing countries;
- Level of contribution to knowledge sharing, best practices, and lessons learned;
- Replicability or relevance on a broader scale;
- Sufficient evidence, data, and the maturity of the study (if applicable);
- Knowledge or skills development; and
- Degree of interaction.

Judges then reviewed the highest-scoring proposals to select the most relevant submissions and categorized them by thematic areas such as Partnerships, Mobiles for Reading, Mobiles for Youth Workforce Development, and System Strengthening. This resulted in an agenda comprised of multiple plenaries, 20 breakout sessions, and seven posters and demonstrations.

This year's Symposium was designed to foster collaboration and partnership building among the mEducation community from around the world as well as to explore ways in which the mEducation Alliance can play a role in facilitating this process. To ensure balanced and open dialogue and to maintain an intimate atmosphere, the Planning Committee handpicked invitees and limited participation to two representatives from selected organizations and institutions. Participants included researchers, project implementers and innovators, private sector companies, U.S. and foreign government representatives, NGOs, foundations, bilateral donors, and trade associations.

The event opened with remarks by a panel of representatives from USAID, U.S. Department of State, NASA, and Alcatel-Lucent. Following the opening plenary, attendees were invited to participate in a networking activity and the open session activity was introduced. Participants were invited to contribute

their own ideas and topics for small self-moderated breakout sessions during the Parking Lot activity held the following day and were encouraged to sign up on the Parking Lot boards to host their own open sessions. On the first day, participants were free to attend any of the five concurrent breakout sessions during each of the three breakout session blocs. The first day closed with a participatory session featuring a 'reverse-audience' approach that allowed participants to share personal challenges they had faced in partnership formation with a select panel of representatives from the public and private sectors who offered insight into building successful partnerships from their personal perspectives.

During the second day of the Symposium, activities and breakout sessions built upon these partnership lessons encouraging attendee participation and sharing of knowledge through more interactive sessions. After the opening plenary by John Traxler reflecting upon past lessons in the field of mLearning over the last decade and a panel session that highlighted the importance of localization and contextualization in project development, attendees were invited to participate in the Parking Lot activity. More than 20 small breakout sessions were held throughout the conference area, where participants were invited to share and discuss relevant lessons on a range of topics from possible partnership opportunities with the wider mobiles-for-development community to developing guidelines for mLearning initiatives around the world. The sessions also sought feedback from participants about their interest in the Mobiles for Reading and Mobiles for Youth Workforce Development Working Groups of the Alliance. In the afternoon session, participants were encouraged to visit the posters and demonstrations area, which showcased and highlighted some of the projects, organizations, and institutions at the forefront of innovation using mobiles for education around the world. Closing remarks examined the steps needed to move toward future progress for the mEducation community. Evaluations were provided for attendees to give feedback on their overall experience at the Symposium.

This report provides summaries of the presentations and discussions in the plenary and breakout sessions in multiple tracks, select reflections from key presenters, a mYWD overarching track summary, and feedback received from some Symposium participants.

Opening Remarks and Keynote Addresses

Session: *Opening Plenary (9/5, 9:00 – 10:00am)*

Facilitator: [Anthony Bloome](#) (USAID)

Presenters: [Eric Postel](#) (USAID)

[Leland Melvin](#) (NASA)

[Ann Mei Chang](#) (U.S. Department of State)

[Florence Gaudry-Perkins](#) (Alcatel-Lucent)

Anthony Bloome (USAID) opened the *2012 Mobiles for Education (mEducation) Alliance International Symposium: Partnering for Scale & Impact* with a plenary which included Eric Postel (USAID) and Leland Melvin (NASA). Remarks included introductions and a preview of two enriching days with key leaders in the field of technology in education (for the full transcription of Mr. Postel's opening remarks, see Appendix A).

Mr. Postel stressed the importance of private and public partnerships in future efforts in education. There are still many pressing challenges in Sub-Saharan Africa and Asia which cannot be adequately addressed by a single individual, donor, or government entity. Additionally, evidence showing that projects are sustainable, cost effective, and appropriate for the context are vital to scale and impact for future programming.

Mr. Melvin reiterated the message about partnering for scale and leaving an impact and a legacy on children around the world. He said, "It takes a village to raise a child and this symposium is the village." Mr. Melvin spoke about the recent passing of Neil Armstrong and his dream of space travel. Every child has a dream and practitioners must seek the necessary opportunities to bring these dreams to reality. He talked about NASA's current efforts regarding mobile technology, including newly launched mobile applications that inspire and motivate youth to think about math and science.

A question-and-answer session among panelists followed. Ann Mei Chang (U.S. Department of State) and Florence Gaudry-Perkins (Alcatel-Lucent) joined the panel. Panelists were asked for suggestions about how to deepen scale and impact. All agreed scale and sustainability requires broad sector cooperation. The more agencies that are involved, the deeper the impact will be. The key is to bring in different expertise and resources from each agency to leverage the best of each sector. Rather than piloting many initiatives of similar caliber, bringing best practices together to achieve optimum results is more efficient. The panelists reiterated that the public and private sectors are critical to success. Furthermore, the private sector can help with furthering research and development for programs.

Ann Mei Chang spoke regarding technology connectivity around the world. It is not realistic to believe that everyone has access to the Internet. Even in places that have coverage, access may not be possible. Affordability and Internet literacy are also barriers. In places like Afghanistan, men have seven times the access to the Internet as women. There is a need to take smaller steps in the interim and think of other ways data can be transmitted, such as by radio. The key is to provide information that can be leveraged by those who receive it. Florence Gaudry-Perkins added that a change in mentality must take place and practitioners must form partnerships with corporations who are moving toward a model of sustainability of scale. Practitioners must learn how to partner with the developing world. To continue on the same path is risky without researching new ways and new approaches.

Key takeaway points included the importance of partnering for scale and impact, identifying challenges in developing countries, and finding new and innovative ways to overcome barriers that youth around the world experience daily.

Breakout Sessions Day I (Morning Sessions)

Session I.a: [Partnerships: Advancing 21st Century Education \(ACE\) in Kenya – A Public-Private Partnership](#) (9/5, 11:15am – 12:30pm)

Facilitator: [Rob Schneider](#) (USAID)

Panelists: [Jodi Lis](#) (FHI360)
[Julie N. Clugage](#) (Intel)
[James Bernard](#) (Microsoft)

This presentation examined the collaboration, communication, and relationship-building processes that supported the public-private partnerships that created the *Advancing 21st Century Education (ACE)* project in Kenya. In 2009, USAID, the Kenya Ministry of Education, Intel, Microsoft, and Cisco agreed to partner for a common goal: supporting the development of 21st-century skills through one-to-one, or one-student-to-one-device, education technology and capacity building to improve the quality and access to education in Kenya. With this shared goal and focus on the needs of the key stakeholders—mainly teachers and students—the project deployed networked computers and supported their use through pedagogical and technical training, technical infrastructure, digital content, knowledge sharing through the national school system, and the establishment of the School Technology Innovation Centre (STIC).

Jodi Lis (FHI360) presented an overview of the project and discussed the roles and responsibilities that each of the partners had in ensuring the development and sustainability of the project. Early in the project, the partners organized monthly meetings to ensure that clear channels of communication were in place so they could respond to any needs or weaknesses in the project as it developed. Three regional teams were established in Kenya to introduce and implement the programs, ensuring ownership from the local level and from educators and government officials. Local committees were formed to select the schools that would participate in the program, which included primary and secondary schools, teacher training colleges, and a school for the deaf. Ms. Lis stressed that success of the project could not have been possible without the support and buy-in from government and school officials who would help sustain it in the future.

Rob Schneider (USAID) discussed the project development process and the important role that partnerships played in it. He explained that after identifying the host country's need, stakeholders, and receptiveness to a technology-focused initiative, USAID began to explore potential partnerships among long-term partners in the private sector. Microsoft worked closely with Intel to develop a curriculum that could be aided by the technology and worked alongside local staff to help train teachers and facilitate the project. James Bernard (Microsoft) said that the partners were wary of what he called 'pilot fatigue' in Kenya, a country that had been the testing ground for many development projects, and that their focus shifted progressively to exploration of how to scale not just the project, but also the kinds of business models and partnerships that will be essential to sustainability. All of the panelists agreed that no one-size-fits-all answer exists that would allow this or any other one-to-one education project to be applicable across various country contexts.

Key takeaway points included the crucial need for partnerships, especially those between the public and private sectors that are able to foster communication and collaboration while considering the needs and input of key stakeholders. Buy-in from government officials and teachers at the local level are essential to the sustainability of these kinds of projects, as is a clear and well-informed understanding of the political landscape.

Session I.b: *mReading: Partnerships for Data & Assessment (9/5, 11:15am – 12:30pm)*

Facilitator: [Dr. Jordan Naidoo](#) (UNICEF)

Presenters: [Norbert Rennert](#) (SIL) and [Mike McKay](#) (RTI)

Tangerine: Class – Partnerships in Open Source Development to Enhance Reading Instruction

[Yvette Tan](#) (EDC) and [Dr. Roger Rasnake](#) (JBS International)

[eEGRA: Using Strategic Partnerships to Drive Innovation in Literacy Assessment Software](#)

This session looked at partnership opportunities for combining open-source mobile tools with assessments such as the Early Grade Reading Assessment (EGRA). Norbert Rennert (SIL International) presented the Tangerine–SynPhony Prototype, which is software that allows teachers to create customized reading exercises for use by students to practice reading and improve literacy. Mike McKay (RTI International) talked about how RTI has used Tangerine to make EGRA into an electronic tool. RTI is helping teachers to assess students on a regular basis using mobile technology. Class progress reports generated from Tangerine identify weak learning and subject areas that teachers need to address. Tangerine is open-source so organizations, such as Save the Children, can make changes to the software and contribute those changes back to the open-source version to be accessed and assessed by anyone. Mr. McKay and Mr. Rennert stressed the importance of bringing education and technology experts together to collaborate and talk about these kinds of tools to improve education around the world.

Yvette Tan (EDC) discussed eEGRA, an electronic tool similar to Tangerine but created in Excel, chosen because of its wide availability. Ms. Tan reviewed some of the benefits of having tests in electronic format: test results can be collected much more quickly, tests can be easily translated into other languages, and encoder errors are greatly reduced. Dr. Roger Rasnake (JBS International) discussed the qualitative assessments that JBS conducted in Tajikistan and Kyrgyzstan using the eEGRA tool. The assessment team was able to translate the tests into Cyrillic languages and teachers were able to understand and use the tool to collect data on their own. However, the team did face several challenges such as hesitancy from teachers to use technology and the occurrence of frequent power outages.

The panelists discussed some challenges of collaboration. Mr. McKay said that when working with a software developer, a great deal of work has to be done initially to ensure a unified vision for the product. Mr. Rennert agreed that time is needed to ensure development of a mutual understanding of the goals of the products, but that the end result is improved from working together. Ms. Tan said that feedback from JBS on what additional features would be beneficial to the eEGRA was useful to the development process.

Audience members joined the discussion and asked critical questions concerning the randomization of test questions and the reliability and applicability of the results to inform education policies. Mr. Rennert commented that SynPhony could be used to generate many different sets of words using the same five letters, for example, to allow for multiple test variations. Dr. Rasnake pointed out that usually these kinds of studies are sample-based efforts, which test a small number of children and then undergo statistical analysis to understand the data more generally. Officials from ministries of education can make sure the tests are well adapted to their language, which increases data reliability.

Key takeaway points included the importance of capacity building for students and teachers in the use of technological tools and the importance of buy-in from local governments for sustainability. The presence of technology is increasing rapidly in the developing world, but it needs to be something that people can feel ownership for and adopt. It is important to use existing hardware and acknowledge that available resources are often limited.

Session I.c: *Mobiles for Youth Workforce Development (mYWD): Taking Stock of mYWD*
(9/5, 11:15am – 12:30pm)

Facilitator: [Linda Raftree](#)

Presenters: [Lauren Dawes](#) (GSMA)

[GSMA's Shaping the Future](#)

[Theo van Rensburg Lindzter](#) (M-UBUNTU)

[Thabang Mogale](#) (Millennials as Mobile Educators)

Millennials as Mobile Education Providers: Linking Service Learning, Workforce Readiness, and Entrepreneurship

Lauren Dawes presented GSMA's *Shaping the Future* report, which included statistics on mobile use among young people in Morocco, Ghana, Uganda, and India. Ms. Dawes and her team spoke with 250 youth through focus groups and surveyed an additional 1,200. The largest problems identified in the survey were unemployment and a critical skills mismatch between youth and employers. Only 25 percent of the young people surveyed listed the classroom as their primary source of information and education. The study found that mobiles are the most important asset of young people, ranking above clothing and shoes. Eighty-seven percent of respondents said they would be open to mobile advertisements if it reduced the cost of their service and 63 percent said they could learn through a mobile device. The team also found that targeting the whole family is important, as parents often own the phones.

Theo van Rensburg Lindzter interviewed Thabang Mogale about the Millennials as a Mobile Education Providers project, now implemented in South Africa. A key part of the program is to promote the idea that youth are an untapped resource that can engage, lead, and contribute to training initiatives. The project includes subsidized internships for unemployed or out-of-school youth, service learning as a credit-bearing component of university degree programs, in-school service learning opportunities for secondary school students, and training accompanied by ongoing support and mentorship. The program uses recycled devices as platforms for curriculum-aligned educational content and university students serve as literacy/numeracy coaches for students in under-performing rural and township high schools.

Key takeaway points included the need for students to have hope for the future, as young people often feel discouraged when they cannot find meaningful work, and the need for implementers to balance local context with program approaches that can reach a large number of youth. Portugal, for example, has deployed mobile devices on a large scale, which could serve as a possible model for scaling. However, the area of accreditation of mobile education and legitimacy of training courses delivered via mobiles must be addressed.

Session I.d: *In Focus: mEducation in Crisis and Conflict (9/5, 11:15am – 12:30pm)*
Facilitator: [Dr. Yolande Miller-Grandvaux](#) (USAID)
Presenters: [Ferran Lloveras](#) (UNESCO) and [Jacob Korenblum](#) (Souktel)
[Partnering to Deliver Mobile Services that Strengthen Education Systems in Crisis & Conflict Settings](#)
[Mike Dawson](#) (Paiwastoon)
[EXE Mobile: New Open Source Editor for J2ME-based mobile education and literacy in Afghanistan](#)

Dr. Yolande Miller-Grandvaux (USAID) outlined the unique challenges and needs of conflict-affected environments. She stressed that conflict-affected environments in particular have an intense *demand* for, but limited *supply* of, education. While the Department of Defense funds many technologies and many innovative technology approaches have been developed for natural disasters, the education sector has not received the same level of attention and funding. She asked how approaches and best practices in these different sectors can be applied to education. Additionally, she emphasized that along with reading and higher education, education in crisis and conflict environments is one of the three focus areas of the new USAID education strategy. USAID has been trying to monitor education initiatives and provide leadership in this sector by promoting equitable access to 15 million learners in conflict environments. Equity is one of the most determining factors vis-a-vis accessibility; lack of equity due to religious or identity affiliations can negatively influence access. The presenting organizations have particular expertise in mobile education in conflict environments.

Ferran Lloveras (UNESCO) and Jacob Korenblum (Souktel) presented their mobile service in Gaza that helps maintain continuous education delivery during crisis and conflict events. Due to on-going conflict in the Gaza strip, frequent school closures block organized methods of communication. Souktel, in partnership with UNESCO and in consultation with local stakeholders, developed a rugged and adaptable system that can work prior to, during, and after an attack. It allows school staff to provide parents with information and students with instruction during emergencies, either through a web interface when Internet access is available, or through authorized, password-protected mobile phones when it is not. The software is both easy to use and secure; it ensures that messages are only from an authorized source.

Mike Dawson (Paiwastoon) presented the EXE and the Ustad Mobile software used to address three key problems in Afghanistan: very low levels of literacy, poor teacher capacity, and lack of experienced programmers to design an education technology program. EXE Mobile is an open source, point-and-click editor that gives content designers an intuitive tool for building interactive instruction programs. It does not require programming or high technical capacity. Content created in EXE Mobile can be exported to a phone's memory card, giving students access to information even when networks are unavailable. Using EXE, Mr. Dawson's team developed Ustad Mobile, an interactive, mobile version of Afghanistan's existing curriculum. Ustad Mobile curricula are stored in memory cards distributed in existing phone shops since one in four of these shops contain at least one computer. Inexpensive feature phones (not smart phones) can run the content.

This session focused on (a) the level of engagement by the Ministry of Education, (b) whether the MoE was in charge of content creation, and (c) the cost and use of the software. The cost of the Gaza program is limited to the cost of sending out text messages, which can be lowered by government, private sector or donor subsidies. The Ustad Mobile curriculum is too large (1.5 GB) to be updated by downloading from a network and must be updated from hard media, like CDs, distributed through mobile phone shops. The presenters addressed the potential of the Souktel project for collecting data.

Key takeaway points included the importance of (a) creating robust education delivery systems capable of delivering materials prior to, during, and after conflict events; (b) using existing infrastructure (such as phone shops) to deliver content, and (c) the tremendous importance of localization.

Session I.e: *System Strengthening: The Power of Parents in mEducation (9/5, 11:15am – 12:30pm)*

Facilitator: [Kevin Cropper](#) (Peace Corps)

Presenter: [Toni Maraviglia](#) (mPrep Kenya)

[*The Power of Parents in M-Education: Leveraging the Most Overlooked Educational Partners*](#)

This session explored how mPrep, an mEducation initiative that began in 2011 in Kenya, could facilitate greater parental involvement in their children's education through generation and sharing of data. The presenter, Toni Maraviglia (mPrep Kenya), facilitated an interactive session that responded to participants' questions which focused on elucidating how mPrep works, how parents are using the information it provides, if using it entails extra work for educators, how illiterate parents could make use of it, and the effects of taking a for-profit approach to improving educational outcomes.

mPrep launched an SMS, web and mobile web-based study tool in February 2012. Students receive quizzes related to the subjects they are studying via their mobile phones. The quizzes complement classroom lessons and follow the national curriculum that teachers instruct in school. Some teachers assign quizzes while others let students choose their own. Currently, approximately 6,000 seventh and eighth grade students participate in the program. Parents are able to access information on children's scores and schools may access quiz results for individual participants and at aggregate levels. mPrep compiles all of the results. Students pay per SMS to answer quizzes and parents and schools pay minimal amounts for subscriptions. Data are available through web, mobile web, and SMS. SMS was added at the request of parents. While 95 percent of the population in Kenya has a cell phone that can receive a message, only 2 percent have smart phones. Many parents access the information in cyber cafes.

Through data provision, mPrep encourages parents to become actively involved in their children's education and provides schools with information about students' strengths and weaknesses. Often, parents disengage because they lack funds or understanding of their roles in their children's education. Because teachers have very large classes, they do not have the time to do assessments of students until the end of a term. mPrep provides teachers and parents with data. The data serve as a catalyst that brings parents and teachers together to improve student performance through increased communication and engagement. This increases awareness of students' performance, therefore all parties are aware of the need to improve well before the end of a term. Parents are also sharing learning results with their students and discussing areas for improvement. Because the company is still new, mPrep is not yet at the point of providing specific tools to parents to assist in data usage.

Current information indicates that students using mPrep do better in school than those who do not use it. mPrep is only in the first stages and to have a greater impact, the program needs to affect more students. One challenge that mPrep is working to overcome is illiteracy among parents. Currently, the focus is on the early adopters who are literate. Product wise, SMS has limitations. mPrep is looking to develop a voice-based solution. It is also trying to build a large enough base to find funding and support for this effort. mPrep's official partner is the Kenyan Primary school Teacher Association. mPrep's project has not yet been adopted by the Ministry of Education partly because of its start-up business model. However, the company has ensured that it is working with the ministry's quality assurance department to promote buy-in and work towards eventual adoption.

The key takeaway for this session is that mEducation initiatives like mPrep can involve parents as a means to improve educational outcomes.

Breakout Sessions Day I (Afternoon Sessions)

Session 2a: *In focus: Mobiles as Assistive Technologies* (9/5, 1:30 – 2:30 pm)

Facilitator: [Axel Leblois](#) (G3ict)

Presenters: [Kristina Pappas](#) and [Betsy Beaumon](#) (Benetech)

[*From Symbian to Smart and Beyond: Making Reading Accessible to All*](#)

Presentations in this session focused on the power and potential of mobile devices for those with disabilities, especially those who are visually impaired. Presenters highlighted technologies such as iPhone/iPad applications that facilitate access to content and materials in many languages. Presenters also discussed remaining challenges such as ensuring availability of technology for everyone at an affordable price, overcoming negative perceptions of mobile devices in a classroom, and providing accessibility to content and texts where copyright laws are strict. The presentation also focused on what Benetech has done to address some of these challenges and how they use partnerships globally to access content and expand coverage.

Axel Leblois (G3ict) discussed some of the challenges persons with disabilities face when learning. He provided some examples of where technology (especially mobile technology) is helping to bridge some of these gaps. Leblois highlighted some of mobile technologies' advantages over others, including user-friendly design and widespread popularity, useful features and applications, minimal storage area requirement, applications that are designed to address specific disabilities, and the ability to share technology and information with friends and family.

Kristina Pappas (Benetech) spoke about the importance of making education materials available to the visually impaired and described Benetech's BookShare project, a virtual library for the visually impaired. Ms. Pappas highlighted the wide range and number of partnerships BookShare has, now numbering more than 200 throughout 40 countries. These include libraries, publishers, and authors from around the world that have enabled them to make resources available in Arabic, Hindi, Spanish, English, French and, most recently, Afrikaans.

Betsy Beaumon (Benetech) also spoke about BookShare and the objective of making mathematics and science textbooks more available to the visually impaired. She also talked about the open-source nature of the software used in BookShare, which allows people to continually improve and upgrade its capabilities. Ms. Beaumon highlighted BookShare's accomplishment of being the leading provider of education materials for visually impaired learners accessible in Arabic and what the process of that achievement entailed.

Key takeaway points included the increasing role of technology in making education generally, and texts specifically, available for persons with disabilities; the importance of partnerships to ensure maximum accessibility and affordability of these technologies; and the role of intellectual property and property law to ensure that rights are protected while material is also available and accessible.

Presenter’s Reflection: Mobiles as Assistive Technologies

By: [Axel Leblois](#)

The promises of mobile applications and services for education are considerable, ranging from access to the Internet, reading material, using pictures, writing, listening to sound files, and connecting beyond the classroom to schedules, materials, and education resources. With a global market generating unprecedented economies of scale, mobile phones and tablets are poised to be omnipresent in most education settings—in developing nations in particular, which can leapfrog PC technology and adopt cheaper, more versatile mobile devices.

While this development takes place, it is crucial to take into account the accessibility and assistive features and applications available on mobile devices for various types of disability. In the United States, surveys conducted by the Department of Education show that 13.2 percent of the population of students in K-12 public schools live with a disability and therefore are unlikely to benefit from mEducation to the same extent as the general population of students.

	1980-81	1990-91	2000-01	2008-09
<u>All disabilities</u>	<u>10.1</u>	<u>11.4</u>	<u>13.3</u>	<u>13.2</u>
Specific learning disabilities	3.6	5.2	6.1	5
Speech or language impairments	2.9	2.4	3	2.9
Intellectual disability	2	1.3	1.3	1
Emotional disturbance	0.8	0.9	1	0.9
Hearing impairments	0.2	0.1	0.2	0.2
Orthopedic impairments	0.1	0.1	0.2	0.1
Other health impairments	0.2	0.1	0.6	1.3
Visual impairments	0.1	0.1	0.1	0.1
Multiple disabilities	0.2	0.2	0.3	0.3
Deaf-blindness	0	0	0	0
Autism	0	0	0.2	0.7
Traumatic brain injury	0	0	0	0.1

While statistics in other countries vary considerably or are simply unavailable, actual percentages are similar in most countries, perhaps greater among developing nations due to health, nutrition, and environmental conditions. As the table above shows, 5 percent of the 13.2 percent represent students who have learning disabilities.

With those metrics in mind, ensuring that students with disabilities are taken into account should be an essential component of any large-scale deployment of mobile applications and services for education.

Two elements are required to implement solutions that work for students with disabilities.

I. Leveraging standard features available on mobile phones. These would include features such as:

- Text to speech
- Optical Character Recognition (OCR)
- Dictation
- Recording
- Scheduling
- Picturing
- Web access
- GPS

Standard features, if well used by educators in the classroom, can bring significant benefits to students with different types of disability. A good resource in that regard is the report summarizing the research conducted by the University of Tokyo, “The 99 Tools from the Magical Pocket of Aki-chan”¹ on the use of mobile phones for students with disabilities.

2. Using mobile platforms for assistive applications

While assistive technologies have been traditionally available on dedicated devices or personal computers at fairly high prices, the development of powerful mobile devices, smart phones, and tablets in particular have changed the paradigm for assistive technologies. In many cases, what used to cost several thousand dollars can now be replicated for a few hundred dollars on devices running iOS or Android.

Mobile assistive applications are now available for a variety of special needs including **Attention-Deficit/Hyperactivity Disorder (ADHD)**, aphasia (e.g., brain injury, stroke), autism, Down Syndrome, learning disabilities, sensory processing disorder, stuttering, motor disabilities, finger dexterity, hand-eye coordination, etc.

The Apple App Store, for instance, includes a sub-section in its education section for ‘Special Education.’ It includes the following categories:

- Communication
- Emotional development
- Seeing and hearing
- Language development
- Literacy and learning
- Organization
- Life skills

Similarly, the Android platform offers many assistive applications.

In summary, assistive solutions on mobile devices bring the following unprecedented benefits to students with disabilities and educators:

- Standardized, low-cost, worldwide availability;
- Very ‘cool’ versus embarrassment for users who had to carry weird devices in the past;
- Needs little space on the desk;
- Many useful features for educational settings are built-in;
- Disability-specific assistive applications;
- Continuum: use of device by student anytime anywhere—at school, at home, on the road; and
- Families can get involved.

Assistive applications and accessible features ought to be considered in any effort aimed at promoting mEducation solutions.

Considerations for Moving Forward in Low-Resource Environments

While assistive technologies were financially out of reach for educators and students in developing countries for many years, recent developments of open-source applications have changed this situation.

¹ http://g3ict.co/download/p/fileId_840/productId_170

Screen readers for reading-impaired students, for instance, were costly and unavailable in many languages. One open-source screen reader, Non-Visual Desktop Access (NVDA),² is now available in 35 languages and provides state-of-the-art screen reading technology free of charge for the Windows environment. Additional user groups are localizing NVDA in more languages at a fast rate. A good example of successful adoption of NVDA is the Thika School for the Blind in Kenya. NVDA is used for all computer tasks by both blind faculty and students.³ Bookshare.org,⁴ similarly, in conjunction with free open-source e-book readers such as DAISY⁵ offer an unprecedented array of resources to students and educators with more than 164,000 freely available e-books. Bookshare.org pursues a focused strategy to make services available in developing countries.

The next steps for many educators around the world will be to consider the new paradigm of low-cost tablets and smart phones for students with disabilities. The number of assistive applications ported or created for those devices is growing exponentially. Their cost and versatility will make them a natural next-generation set of tools for educators in low-resource environments. Apps4Android⁶ which offers free open-source screen readers, e-book readers, and many more applications for users with disabilities, has enjoyed more than 6,000,000 downloads from 136 countries over the past two years. Projects such as this bode well for the future of tablet applications for special educators and students with disabilities.

² <http://www.nvda-project.org/>

³ <http://www.inable.org/index.php/programs/computer-labs-for-the-blind> and <http://lilliankaivilu.wordpress.com/2012/04/18/breaking-the-barriers-of-disability-she-challenged-me-2/>

⁴ <https://www.bookshare.org/>

⁵ <http://www.daisy.org/>

⁶ <http://www.apps4android.org/>

Session 2.b: *mReading: Research and Evidence from the Field (9/5 1:30 – 2:30pm)*
Facilitator: [Anthony Bloome](#) (USAID)
Presenters: [Dr. Matt Kam](#) and [Dr. Pooja Reddy](#) (American Institutes of Research)
[*Designing Mobile Learning Initiatives to Enhance Educational Quality and Strengthen School Systems*](#)
[Dr. James Stiles](#) and [Dr. Hilary Janks](#) (University of Witwatersrand)
Mobiles, Apps and Literacy in Schools

Dr. Matt Kam and Dr. Pooja Reddy (AIR) talked about current efforts in designing mobile learning initiatives to strengthen school systems. These initiatives focus on usage of low-end mobile phone devices to promote English language literacy. A major milestone includes using exploratory studies and formative testing over longer periods, giving as an example a current pilot in India that has been implemented for one academic year. The presentation focused on identification of the roles of research and evaluation in moving the mobile technology dialogue forward, and discussion about whether education technology works and under what conditions. The answers to these questions are dependent on the enabling conditions in particular environmental contexts. The project implementers noticed significant post-test gains in spelling skills among participants. An average student learned 46 new words over 16 weeks of participation. Hindrances to the program included cultural gender norms and availability of electricity. On average, participants were only able to keep cell phones charged for two hours and 23 minutes per week of mobile learning.

Dr. James Stiles and Dr. Hilary Janks (University of Witwatersrand) discussed text making as a path to literacy development in South Africa through technologies such as the iPad. The project has three pillars: community resources for literacy, education, and ambition to succeed. South Africa has very high cell phone penetration, which means many children have access to cell phones. Youth in Grade Five have the ability to choose and control which outlet they develop literacy skills through, whether through email, an instant message, or a game. The key is that the entry point to literacy is through writing by text production, not through reading. A main thrust of the research project is to create the desire for literacy by letting students experience literacy usage. The project also works with teachers and mobile technology such as the iPhone to find ways of incorporating application and knowledge into classroom curricula. In order for this program to be successful, teachers and schools must be supportive. The session concluded with an interactive exercise to generate and capture ideas about projects. The questions included:

1. What are the potential of applications for teaching literacy?
2. Are mobile phones just another delivery mechanism?
3. How should learners' success be assessed? How should teachers' success be measured?
4. What kinds of partnerships are particularly valuable?
5. How should such research studies or interventions think about scalability?

Key takeaway points included the importance of the enabling conditions of environmental contexts for the success of educational programs. Scholastic and community support are also critical. This session showed a different approach to learning through the South African model, which focused on achieving literacy through writing rather than through reading.

Session 2.c: *mYWD Connections and Content for Out of School Youth (9/5, 1:30 – 2:30pm)*

Facilitator: [Kimberley Kerr](#) (The MasterCard Foundation)

Presenters: [Scott Isbrandt](#) (EDC)

[PAJE-Nieta and the Stepping Stone Mobile Content Authoring Platform](#)

[Jonathan McKay](#) (Praekelt Foundation)

[Ummeli: Mobiles for Youth and Workforce Development](#)

Scott Isbrandt (EDC) spoke about the PAJE-Nieta program, which supports 14–25 year olds in small rural villages in Mali. The program aims to increase literacy and entrepreneurship skills, leading to increased access to market information systems and enhanced livelihoods. The challenge is taking the effective ICT strategies to low-resource settings and finding affordable, accessible, and sustainable solutions. The Stepping Stone program was built for the Nokia 3c01 model phone, chosen because that handset was inexpensive and had relatively high functionality. The program includes digital textbooks, learning assessments, direct feedback capability, and interactive audio that are pre-loaded onto the phones. The concern is sustainability after the grant ends, so EDC is looking at ways to work with kiosks, pre-loading content on micro Secure Digital (SD) cards, and instituting membership fees.

Jonathan McKay (Praekelt Foundation) introduced Ummeli (“mediator” in Nguni), a highly functional job portal that was created because of feedback from Praekelt’s Young Africa Live initiative. Praekelt worked with Vodacom to ensure that there would be no cost to end users because youth in marginalized and/or rural communities often cannot cover data charges. Ummeli was designed to be a community tool specifically for mobiles. In addition to listing jobs, the portal enables users to create their own opportunities and has extensive supplemental support, such as career advice and peer networking. Ummeli is intended to help youth find meaningful work, not simply employment. The program is exploring enhancement of existing coursework for low-end handsets and developing an accreditation process for the curriculum. Ummeli currently has 87,000 users.

Discussion centered on relevant partnerships. EDC works with many partners, including Ministries of Education, community youth associations, and the private sector. Mr. McKay emphasized the importance of mobile operators as partners and offered mutually beneficial ways for operators to bring people onto their networks at a low cost. A challenge for Ummeli is that employers are reluctant to take CVs at face value, so they partner with a human resources verification organization. They are also interested in providing certification for courses accessed through mobile technologies. EDC emphasized that they are working in areas where no classrooms exist so their approach needs to work even where infrastructure is absent.

Key takeaway points from this session included the necessity of developing strong partnerships, options for creating sustainability in mobile workforce programming, and benefits of providing certifications for completed coursework.

Session 2.d: *In Focus: Universal Design and Collaboration for mEducation (9/6, 1:30 – 2:30pm)*

Facilitator: [Christine Capota](#) (IDB)

Presenters: [Isabelle Duston](#) (iLearn4Free)

Achieving Universal Design for Early Literacy with mLearning

[Marc Boxser](#) and [Phil Redhead](#) (GEMS Education Solutions)

Tablets in and out of the Classroom: Unlocking Student Creativity and Peer Collaboration with the iBook Author App

These presentations focused on applications for mobile devices that provide students with interactive learning experiences. Isabelle Duston discussed her company, iLearn4Free, which she developed after she saw her children using interactive websites and games in school and realized that these websites and games were available only in English. Rather than building an application in each of the thousands of languages in the world, she built a template which applies many different languages. Ms. Duston discussed the universality of iLearn's template in contrast to an application based on local songs or a rhyming application, for example, which would not translate to another language easily.

Marc Boxser and Phil Redhead (GEMS Education Solutions) discussed using applications and mobile devices for creativity and collaboration. GEMS focuses on helping children access affordable education and getting e-readers into schools. Mr. Boxser and Mr. Redhead pointed out that reading is not the most effective way to learn. For example, in Bloom's Taxonomy of Learning Domains—a classification of learning objectives within education—the highest, most advanced level is the ability to create, whereas simply understanding content is fairly lower and easier to achieve. They showed a video of a young girl who talked about using their iBook Author application to create stories in school and how much she enjoys it. Using the program, children are able to create stories, publish them, and share them in DropBox with classmates and friends.

An attendee asked about the usage of these tools in different cultures and if they were useful in low-resource situations. Ms. Duston responded that many ideas are adaptable to different cultures with very few changes. For example, Sesame Street is used 'as is,' with only the addition of a local puppet. Therefore, those creating mobile applications should only adapt what needs to be adapted and keep as much in common across cultures as possible. Mr. Boxser and Mr. Redhead added that their application is free as long as a person has the hardware to download it so incurs no additional cost above the device and the Internet connection. They are trying to get students connected around the world and envision an international sharing platform for children to post the stories that they write.

The fact that different places or countries have different infrastructure and capabilities was addressed. Ms. Duston emphasized that if a developer has a template, he or she only has to make a change one time in an application and it is useful in different-language applications. Presenters also addressed the role that partnerships will play in the future. One attendee raised an interesting point about local languages: students in Namibia are not fluent in English or in their local languages but speak some of each. It is important to be realistic about places where there is no capacity to develop applications, nor the fluency or literacy in certain languages. Teaching capacity was also discussed. GEMS Education asks teachers to take sabbaticals, from one to three months to yearlong, to get additional training. Mr. Boxer and Mr. Redhead pointed out that there is no middle industry between technology and educators. Teachers and schools often have to figure out the technology by themselves and they often receive donations of obsolete technology from technology companies.

Key takeaway points included the fact that technology can help students 'create,' a better way to learn. The focus needs to be on capacity building, especially for teachers, so they can facilitate the use of technology in the classroom. Application creators need to keep costs low if they want to reach low resource areas. A template that works across languages can help create interactive materials in a variety of languages more easily.

Session 2.e: *System Strengthening: Mobile Tools for Education Data* (9/6, 1:30 – 2:30pm)
Facilitator: [Dr. Chris Dede](#) (Harvard University)
Presenters: [Sony Belizaire](#) and [Rachel Hermes](#) (Catholic Relief Services)
[Plotting and Planning: National mapping and Analysis of Catholic schools in Haiti using iPod Touch, iFormbuilder and GPS Cradle](#)
[Deirdre Naughton](#) (UNICEF Uganda)
EduTrack: Mobile Technology Informing Planning for Quality Educational Outcomes in Uganda

Dr. Chris Dede (Harvard University) opened the session by noting that education systems worldwide are often not fully data-driven, in part due to hesitancy that data may run counter to one's existing beliefs and assumptions, but more often due to lack of data. Mobiles can address the latter issue since their capability to both explicitly and automatically collect data makes them a particularly rich source of data. This session is at the intersection of larger themes within education including database decision-making, the use of mobiles to enrich extant data sets, and the necessity of building an infrastructure for data usage to prepare stakeholders to store, use, analyze and present information from rich data sets.

Rachel Hermes and Sony Belizaire spoke on the education assessment and geo-referencing project in Haiti designed and implemented by Catholic Relief Services (CRS) in partnership with the Episcopal Commission for Catholic Education, the University of Notre Dame, and the Haitian Ministry of Education (MoE). The privately funded project was intended to assess the Catholic education system in Haiti, which provides educational opportunities to approximately 20 percent of all children in the country. The assessment's primary focus was to provide an accurate mapping of both the physical conditions of the schools as well as their surrounding areas after the 2007 earthquake, and their effectiveness at delivering educational capacity.

Data collectors received training to create forms using web applications and then transferred those forms to Apple iTouch devices to perform data collection. Data collectors were brought by parish guides in their respective parishes to gather data in the form of interviews, text, video, and GPS points in various schools. Discussion in Q&A sessions emphasized the importance of providing data to key partners, the utilization of the data in an interactive format reviewed by the government, and the training of existing in-country staff to be able to utilize the data in an ongoing basis even after project completion.

Deidre Naughton (UNICEF Uganda) presented on EduTrack, a mobile phone-based monitoring system that uses a Rapid SMS platform for use in Uganda to track quality education indicators. Used by district education officers, teachers, and education practitioners, EduTrack provides almost real-time indicators that are therefore more accurate than the current paper-based EMIS system. Being piloted in the fourteen lowest-ranked districts identified in the Ugandan Quality Education Initiative from 2007, EduTrack avoids the pitfalls of similar failed efforts that used non-text-based software.

Efforts are made to avoid self-reporting bias from the schools by triangulating data reported from head teachers, teachers, school management committee members, and one management committee member in particular who is often a Girls' Education Movement reporter serving as the external reference point. Polled on a weekly, monthly, or term basis depending on the questions, progress is tracked from each of these sources. Orientation and in-person support are provided to the users and reporters and training is provided to ensure participants in EduTrack know how to text. Ms. Naughton reported EduTrack's immediate positive impact as the dashboard is populated and all logged in users can see the information as it changes.

Key takeaway points included the challenges in scalability, importance of providing data to key partners, the advantages of using text-based SMS reporting, the actionable nature of the gathered information, and the utilization of data in an ongoing basis even after project completion.

Session 3.a: *mReading Hands-on Workshop: biNu and Worldreader (9/5, 3:00 – 4:15pm)*

Presenters: [Mark Shoebridge](#) (biNu) and [Elizabeth Wood](#) (Worldreader)
[biNu & Worldreader: Together Bringing Books to Millions in the Developing World Using a Device Folks Already Own \(Hint: It's Not an iPhone\)](#)

This hands-on workshop focused on the partnership between biNu and Worldreader, which combines Worldreader applications and content on mobile phones using biNu's delivery platform. Mark Shoebridge (biNu) opened the session by providing a summary of the current mobile landscape and the ability of biNu to provide new opportunities for people in low-resource environments. Feature phones are the most widely used mobile devices in the world; they sell four times more than smartphones and have a longer battery life. Mr. Shoebridge added that over the next five years, mobile trafficking is expected to grow 26 times and feature phones are expected to account for 48 percent of all new phone sales in 2016.

In order to improve feature phones' Internet interface and increase usefulness, biNu, a free java application, was created to provide a virtual smartphone experience. It uses compression technology and cache screens to respond quickly to users. Processing and heavy lifting are done in the Cloud and only what is needed is sent to the phone. biNu has grown from 300,000 users in January 2011 to 4.2 million users today, mostly in Asia and a growing number in Ethiopia, Zimbabwe, Brazil, and Mexico. biNu users can access a number of applications, including the Wordnik dictionary, flashcards, and word games, as well as Google and Wikipedia. Most importantly, biNu provides the opportunity for users to transform their mobile phones into e-readers. The delivery platform allows children to access reading material without the need to ship books, with connectivity and mobile technology, books can be delivered cheaply and easily anywhere.

Elizabeth Wood (Worldreader) discussed how biNu and Worldreader have collaborated to develop this project. Worldreader's Book App is now provided on the biNu platform and allows access to books and short stories. Worldreader partners with local and international publishers to provide health information, popular children's books, African stories, and Harlequin romances. Direct interaction with readers via survey has helped Worldreader to take a hub-and-spoke approach when responding to the needs of children in different countries. It has also allowed them the opportunity to see what people are reading and if they are finishing reading the books.

Using biNu's survey capabilities, Worldreader and biNu were able to gain valuable insight into how technology is helping users in developing countries access reading materials. Results show that despite the tiny 240 x 320 pixel screens found on most mobile phones, users do in fact use their mobile phones for reading. They also found that in July 2012, 489,000 readers read more than 24 million pages, with Nigeria having the largest portion of readership, followed by India and Zimbabwe. Readers predominantly are single male students with no children and use their mobile phones to access the internet. Interestingly, results show that most readers prefer romance, followed by action, and 70 percent of survey respondents said they read to learn.

Key takeaway points included the wide range of opportunities for cheap and easy global delivery of books that connectivity and mobile technologies provide. Feature phones dominate the mobile phone market and biNu aims to improve the internet experience on such phones by providing a virtual smartphone experience. Worldreader's application allows mobile phones to become e-readers, though obtaining free or inexpensive content for the application remains a challenge.

Session 3.b: *In Focus: Mobiles for Capacity Building (9/5, 1:30 – 2:30pm)*
Facilitator: [Ray Myers](#) (U.S. Department of Education)
Presenters: [Dr. Christelle Scharff](#) (Pace University)
[MobileSenegal: Three Years of lessons of Capacity Building with Impact](#)
[Jenny Raymond](#) (Pearson Foundation) & [Matthew Wennersten](#) (BridgelT India)
[Empowering Teachers through Mobile Technology](#)

Ray Myers (U.S. Department of Education) began the session by introducing and giving a brief background of each speaker. This session intersects larger themes within education, including the use of mobile technology, teacher training, and the importance of collaborations and partnerships.

Dr. Christelle Scharff presented MobileSenegal that focuses on building capacity of students and developers in the development of mobile apps in partnership with universities mainly in Senegal. The project began in University of Thies but has since expanded to universities across Dakar and into St. Louis, Missouri. Most collaborations are formal with both faculty and students involved but also include people outside of the university that the program has previously worked with and trained. Aside from teaching mobile app development, students receive training in how to choose appropriate technologies and project management. Dr. Scharff emphasized that it is crucial that students learn to build software from scratch, from deployment to release, thus software engineering skills are of utmost importance. Entrepreneurial skills such as marketing skills are also taught as part of the course as mobile app development occurs within the business environment. There is also a strong emphasis for real world application as projects for each mobile app are based on needs of beneficiaries in the real world. Collaboration is also an important aspect of this course as students work together from different universities. Mentoring is another essential component of this course as it is important that students receive mentoring and work to develop their networks. Meet-ups by Mobile Innovation Dakar and Mobile Innovations Thies occur regularly as part of this course. Outcomes of MobileSenegal include release of apps in Google Play store and Nokia Store and integration of mobile app development into curricula at universities.

Jenny Raymond spoke on BridgelT, a global program and partnership between Nokia and Pearson Foundation. BridgelT was founded to respond to challenging circumstances in developing countries where a lack of physical learning materials and inadequate training and ongoing support for teachers in classrooms are major issues. The BridgelT model uses mobile phones to deliver learning materials that are useful in classrooms and provide professional development for the teachers. It uses a blended model of professional development for teachers as it includes both face-to-face training and ongoing support through phones, creating a virtual community of practice for teachers involved in the program. With mobile phones, teachers are able to access a library of digital content localized to the school systems' curricula. Downloaded onto the mobile phones and connected to a projector or TV, content is then shared in classrooms. In India, Matthew Wennersten said evaluation results found students had a ten percent gain in learning as opposed to control groups that did not receive the digital media content. Partnerships are at the core of BridgelT as the program seeks to identify and work with the right local partners including teachers, the local government at state levels, and organizations or companies with direct experience in the local school system to ensure complete buy-in with the school system.

Key takeaway points included the use of mobile phones technologies, the importance of collaborations and partnerships, capacity building of multiple stakeholders and the importance of catering to the needs of beneficiaries.

Session 3.c: *Mobiles for Youth Skills Development (9/5, 3:00 – 4:00pm)*

Facilitator: [Suzanne Phillion](#) (U.S. Department of State)

Presenters: [Michael Carrier](#) (British Council)

Using Mobile Devices to Strengthen Education Systems, Specifically in English, for Basic Education and Supporting Workforce Readiness

[Bhanu Potta](#) (Nokia)

Nokia Life Education Services: mLearning at Scale of Millions

[Shayan Mashatian](#) (Appexiom – Petanque)

A Demonstration of a Mobile Learning Pilot and Findings from Its Implementation

Michael Carrier spoke of the British Council's work on teaching English via mobiles as "breaking down the walls of the classroom." He believes English is a life skill that is part of basic education. Mr. Carrier argued that education initiatives that employ technology have failed because they focus on technology rather than pedagogy. Mr. Carrier noted that learning through SMS is a viable option in rural, low-resource settings and much can be done through SMS. However, he is also trying to recruit users who are able to participate in expanded learning opportunities beyond SMS. Mr. Carrier provided project examples such as a learning project for taxi drivers and a mobile application for Indian job seekers with information on CV preparation and work-related skills.

According to Bhanu Potta from Nokia, there are currently one billion data connected users, 1.5 billion data connectable (but not yet connected) users, 1.2 billion users with only SMS and voice (no data), and 3.2 billion people without phones. Therefore, a huge opportunity (and incredible possibilities) exists in connecting people to data. Mr. Potta explained that Nokia Life software makes cheap mobiles look and feel more like a data-enabled phone, noting that all levels of consumers wish to have a data-like experience. More than just aesthetics, however, this software includes a dynamic home screen with a rotating menu for high discoverability, integration with voice services, a dynamic inbox that highlights new content, and new content channels that can be added using just SMS. It is currently available in India, Indonesia, China, Nigeria, and some additional countries in Middle East and Africa. Nokia Life provides curated content rather than offer access to all the information available via Google. Content is available in a variety of content areas, including education. Nokia Browser, a Cloud-based service, makes this information easier to access by compressing the information by 85 percent, making it three times faster to download and much cheaper for users.

Shayan Mashatian (Appexiom – Petanque) discussed the failures of distance learning and the need to take a different approach. Rather than try to put textbooks onto a phone, mLearning needs to be re-organized, re-formatted, and re-engineered for the mobile device. Mr. Mashatian explained it needs to focus on the user experience and provide interactive content, allowing people to choose, multi-task, and integrate social media. Appexiom allows for educational content creation via a simple setup in which creators can drop in content, making it easy to publish. Mr. Mashatian spoke of a pilot project in which students could chat while completing a learning module, allowing students to control the pace of learning and follow relevant content on the Web.

Key takeaway points included the benefits of working with network providers to reduce the cost of data plans for low-income youth and the recognition that many phones are used by an entire family. The discussion focused mainly on Nokia's work, identified as 'the missing link' between SMS and smart phones.

Session 3.d: *In Focus: Bridging Public and Private with Partnership (9/5, 3:00 – 4:00pm)*

Facilitator: [Dr. Don Knezek](#) (ISTE)

Presenters: [Elliott Levine](#) (HP)

[Overcoming the Hurdles to Mobile Technology Initiatives](#)

[Daniel Adrião](#), (E-xample)

[The Future Generation of Countries will Rise from the New Learning Ecosystem—The Portuguese Example](#)

This session focused on the formation of public and private partnerships in consideration of the needs of all stakeholders to ensure that technology for education initiatives is successful and sustainable. Elliot Levine, HP's education strategist for the Americas, discussed what he considers the six major hurdles to technology adoption, which includes stakeholder buy-in, sustainable budgets, curriculum planning, professional development, student experience, and lifecycle management. He explained how many initiatives fail due to lack of understanding and specific attention. Mr. Levine explained that looking at all of these components while considering the goals of all of the partners involved is essential to the success of any mEducation initiative.

Daniel Adrião (E-xample) shared his insight on public-private partnerships through his experience working with the Escola program, which provides subsidized educational notebooks and Internet access to secondary school teachers and students throughout Portugal. He said Portugal was the first country in the world to implement such a successful one-to-one laptop program countrywide. The key to the project's success was the emphasis on building lasting and mutually beneficial partnerships between the Ministries of Communications and Education, industry partners, and the private sector. The Escola program started with the strong support of the Prime Minister and the innovative design of a business model, of which the largest investment was from the telecom sector.

Most of the discussion centered on the implementation of the Escola Program and lessons learned. Session attendees were interested in how future large-scale programs could be implemented at the national level with the support of governments and succeed in being sustainable and beneficial to all stakeholders. Mr. Adrião said that the Escola program was ultimately suspended a few years into the program because the government could no longer support the project financially. He suggested the need for private sector and telecom companies to support a larger percentage of the program. Mr. Levine commented that program design and implementation should not lose sight of the overarching goals and needs of the beneficiaries, mainly the teachers and students. Dr. Don Knezek (ISTE) agreed and added that that research and evidence are also important considerations when highlighting the potential effectiveness of similar programs.

Key takeaway points included emphasis on the importance of learning from the many examples, lessons, and findings already available in the field of mLearning that can inform and help improve future initiatives. mLearning initiatives should evolve with the changing economic and political climate in which they are implemented, and partnerships between government and private sector stakeholders should consider the long-term benefits and potential challenges before entering into agreements. They should also consider the potential benefits for students, the adoption of the technology by the teachers and school officials, and the overall integration of the project within the school system.

Session 3e: *System Strengthening: Innovations in Content and System Tools (9/5, 3:00 – 4:00pm)*

Facilitator: [Carla Jimenez](#) (The World Bank)

Presenters: [Stanley Edwards](#) (Platypus Digital)
[OGLE Educational Content Kiosks \(South Africa\)](#)
Dr. Eric Hamilton (Pepperdine University)
Dr. Richard Rowe (Open Learning Exchange)

Stanley Edwards (Platypus Digital) talked about OGLE, a digital content delivery platform. These kiosks offer consumers, learners, and teachers the opportunity to browse, select and download content at every platform without paying for data costs. Content is delivered to the kiosks via satellite, which also monitors the data to track content downloads. Entertainment, education, and financial services such as cash transfers are included in the content on the kiosks. OGLE supports local entrepreneurs by providing musicians and filmmakers the opportunity to distribute their products through the kiosk. The revenue from the digital content is paid to the donor after payment for the kiosk is completed. The donor can choose to keep the money, though in most cases, Edwards reported that donors reinvest funds back into the kiosk.

A brief question and answer session regarding satellite connectivity and other features of the kiosk followed Mr. Edwards' presentation. Transmitting content via satellite is the most efficient way of delivering large amounts of data at a relatively cheap cost. Updating the kiosks through hard updates is available and needed to monitor information for copyright laws. The kiosks offer Android applications and use standard audio and video formats. OGLE is also working with other providers to obtain curriculum-based data established on approved content.

Dr. Eric Hamilton (Pepperdine University) and Moses Okumu (Washington University) shared their work about finding new means to move beyond large and outdated classrooms and curriculum. Through mobile devices, youth learn about video production from beginning to end, including recording, editing, and finalizing and sharing the videos among themselves. Development is a three-stage cycle: collaboration between teachers and students in authorizing instructional media, collaborative review, and implementation via mobiles. Primary funders of this research include the National Science Foundation and Microsoft.

Participants asked about the cost of media production and the ability to share among peers. Youth are able to use Camtasia, video recording and editing software, and a computer to produce videos and can then send videos all over the world. Youth in the United States for example, are sending lessons to youth in Uganda and vice versa.

Dr. Richard Rowe (OLE) talked about a new methodology for learning exchange. OLE's approach focuses on skilled coaching in the classroom, rich content, and affordable tools. Skilled coaching in the classroom focuses on a mentoring model rather than a teaching model. Rich content includes dictionaries, encyclopedias, and locally generated atlases aligned with the curriculum. Affordable tools include a local library server accessible on or off the Internet through hand-held e-learners for which every six students receive one. The tools include a RaspberryPi Server, a Wi-Fi router, solar cells, and the tablet. A key component is the collection system with a 20-school mesh network, which allows for shared data and reports regarding the progression of schools.

Key takeaway points included the significance of new mobile platforms that are reaching students around the world to provide education-related content. Platforms showcased include OGLE, a content distributing kiosk; video production through Camtasia software; and the creation of an e-learning library through the low-cost, off-grid RaspberryPi server. All platforms distribute education and entertainment data to students, teachers, and consumers around the world for a relatively low cost.

Closing Plenary Session Day I

Session: *Challenges to Partnership Formation: Expectations and Demands (9/5, 4:00 – 5:00pm)*

Moderator: [Michael Trucano](#) (World Bank)

Panelists: [Mike Nxele](#) (International Telecommunication Union)

[Terry Ferrari](#) (World Vision)

[Dr. Miriam Altman](#) (Human Sciences Research Council in South Africa)

[Lauren Dawes](#) (GSMA)

During this participatory session, audience members were asked to share their experiences, challenges, and questions about partnership creation. Participants presented several topics for consideration: (a) challenges making mobile devices accessible and payments affordable in developing countries; (b) underestimating the amount of time needed to maintain successful partnerships for a project in Afghanistan; (c) understanding the need for people to be convinced of the value of products ; and (d) the challenges of small organizations that find it too expensive to leverage national rollouts on their own, but too difficult to leverage projects with 'big players' as partners.

The panelists responded to some of the issues described by the audience. Michael Trucano (World Bank) noted that World Vision, the organization to which Terry Ferrari belongs, is itself a partnership. Ms. Ferrari pointed out that healthy partnerships depend on understanding what each partner can provide and what each partner needs. She added that transparency, i.e. being very clear about the needs and roles of each member, is helpful to the 45,000-member World Vision partnership. One audience member remarked that the success of her teaching product was proven by the customer's willingness to purchase it. Economist Dr. Miriam Altman (Human Sciences Research Council), however, cautioned against such thinking. Sometimes customers will pay for schooling or tutoring simply because they are desperate and have no other options, not because the schooling or tutoring is actually working.

An audience member shared that the power relations involved in working with the government in countries like South Africa make for difficult maneuvering. A government agency, for example, may be a self-declared head of a project, but then stop providing support for the program. Another participant noted difficulties in working with private sector partners who often put unreasonable demands on the delivery of work and outcomes and then do not guarantee funding. Several audience members mentioned that partnerships take time to establish. Because products become outdated so rapidly, the extra time spent establishing partnerships and dealing with bureaucracies is especially difficult in the technology business. Another participant from South Africa talked about the particular struggles of a smaller organization that must rely on anecdotal evidence alone in the absence of rigorous, statistical analysis of success.

The panelists reiterated their main takeaway points. Mike Nxele (International Telecommunication Union) recommended two steps to establish a good partnership: 1) craft a good project document (agreed upon roles, responsibilities, and timelines) and treat each partnership as a project; and 2), ensure that both partners share responsibilities and involvement in the project, reducing resistance from feelings of being an outsider and having new ideas forced from the other partner. Lauren Dawes (GSMA) said that some companies only focus on scale and mobile operators can be very difficult to work with. Proof of concept and impact is required in order to secure investor buy-in. The panelists recommended positioning or explaining projects in ways that communicate clear value to the target community. Mr. Nxele said, "Make it valuable to the specific community." Ms. Ferrari noted lessons learned from World Vision, a federated partnership: 1) the importance of understanding individual roles and needs in the partnership; 2) the openness required of individual partners' strengths and limitations; 3) the importance of establishing unique roles and building on successes of past projects; and the corollary, 4) looking for individuals with complementary roles to achieve common goals.

Opening Plenary Session Day 2

Session: [Opening Plenary: What Have the Last Ten Years Shown Us?](#) (9/6, 9:00 – 9:30am)

Presenter: [Professor John Traxler](#) (University of Wolverhampton)

The opening plenary focused on the way mobile technologies have transformed the field of education throughout the past ten years, identifying influential trends and subsequent lessons that will inform innovations over the next decade. John Traxler, professor of mobile learning and director of Learning Lab at the University of Wolverhampton, told audience members that a growing body of evidence now exists regarding the positive benefits of mobile learning initiatives over the past decade, but the main issue is scrutinizing and evaluating this evidence critically. The mEducation community is now faced with an important question: What has been achieved and does it have any relevance?

Prof. Traxler suggested that over the last decade, a transition has taken place from when mobile technologies were scarce, fragile, and required technology skills to design a program. Much of the focus during this time centered on exploring opportunities for innovations and controlling how change and technology spread throughout schools, education systems, and regions. Now, mobile technology has become so widespread and ubiquitous that project designers have to struggle to keep up with innovations and changing mobile technologies.

Prof. Traxler also highlighted the progression of mobile learning underpinned by psychology to that of anthropology. Previously, the mEducation community was conceptualizing and defining mLearning. Now, it has moved away from those definitions, forming an understanding of the fluid and transient nature of the field and incorporating a definition of the mobility of the learner. mLearning is spreading to new areas of the world outside of the United Kingdom and Africa by increasing the reach of education in developing countries through opportunities in distance education. In addition to reaching students in low-resource environments, mLearning is now reaching those with disabilities, special learning needs, and those living in secluded or nomadic communities.

Looking at how the field of mLearning will progress in the next ten years, Prof. Traxler noted that problems still exist, especially those concerning scale and sustainability. Increased involvement with stakeholders is needed which cannot solely depend on the government or implementers. Future projects should consider the ubiquity of mobile technologies that are already present in classrooms and move away from one-to-one technology projects that require governments or organizations to provide the devices. Prof. Traxler also stressed the need for providing more evidence and analysis that will inform and develop the mLearning field.

Key takeaway points included the need for a common, holistic view of the mLearning field and its development. The role of ethics in project design, the importance of context, and possible unexpected consequences all need to be given consideration. Moreover, processes should be in place that can anticipate potential problems and negative effects on particular populations.

Presenter's Reflection: What Have the Last Ten Years Shown Us?

By: [Professor John Traxler](#)

This piece addresses issues that I discussed in my recent keynote at the second Alliance Symposium. It looks at what the last ten years of learning with mobiles have shown us and, more specifically, *how* we should examine that learning. It does this by analyzing some of the achievements and asking how they show us any useful trends. It gives few specific examples, since finding examples is no longer difficult either from first- or second-hand sources. The challenge is appreciating what they can tell us about trends.

Looking Forward and Looking Backward

There are, however, some observations that contextualize our achievements and their significance, and also contextualize any trends we might observe.

First, the mobile learning research and development community has not systematically or directly addressed issues of partnering, scale, or impact.

Second, the mobile learning and development community has for the past ten or more years worked in a global economic climate that is very different from the one we anticipate for the next ten years.

Third, the past ten years have seen a transition of mobile technologies from a scarce, obscure, fragile, and expensive technology that needed experts in institutions to conduct educational research to a universal, popular, robust, easy technology that no longer requires experts. Learning on mobiles has become *common sense*, and as policy and programs are formulated, researchers are dropping out of the loop. "Education! There's an app for it!" expresses the idea that maybe we don't need experts anymore, and that the educational theory embodied in these apps will work effectively for everyone, wherever and whoever they are.

Fourth, learning with mobiles started as an extension of the institutional e-learning built into courses and programs, but now it is just one more activity for individuals and communities on their mobiles. Furthermore, unlike any other digital technology, for example TV or computers, mobiles populate the *bottom of the pyramid*, or those people and communities that are most impoverished.

Fifth, we have seen the definitions of mobile learning move from early techno-centric ones in terms of mobile devices to definitions that focus on the mobility and connections of the learner; and from content and what we do in terms of extending the methods and aspirations of e-learning, usually based within the formal institutions of education to serving whole societies characterized and transformed by movement.

We have seen the potential of learning with mobile suddenly ignite in the USA, and amongst the wider donor, agency, and corporation communities, both as an educational proposition and as a commercial proposition. This dramatically increases and transforms the nature and size of the community and moves the center of gravity. It evolved initially in Western Europe and South Africa, with pockets in Asia Pacific. Now North America is becoming a major player.

Trends and Achievements

The most obvious set of trends is the expansion and improvement of technology and infrastructure. Everything will get better, faster, and cheaper. However, even these trends will always be mediated by social, economic, and political factors, such as governments imposing import duties on handsets, users discovering new ways to obtain free calls, etc. These observations all seriously constrain what the trends

the last ten years can teach us. Nevertheless, if we look at the past decade, four major achievements emerge: mobiles have helped extend learning, enrich learning, motivate learners, and extend the theory of learning.

1. Extending Learning with Mobiles

Mobiles allow us to take learning to people, communities, and countries that are otherwise too difficult or expensive to reach. Mobiles help us challenge the barriers of distance, sparsity, and infrastructure. Social, cultural, and economic factors are similar, creating different kinds of distance and hurdles between learning and learners, but mobiles enable us to reach more of the poor, the marginal, and the excluded. The exclusion of girls from education in some cultures is another hurdle, due to a variety of factors such as safety, gender norms, and competing obligations. In some cases, the privacy of mobile devices and their ability to offer learning in a safe environment can help to overcome this hurdle.

Some communities and individuals are separated from learning opportunities by their physiological or cognitive characteristics, for example dyslexia; agoraphobia; or impaired mobility, sight, or hearing. Much work has demonstrated that mobile technologies can take learning to these communities, and many times these initiatives exploit mainstream retail technologies, incorporating these learners back into the educational mainstream and resonating with the ideals of inclusive design.

Nomads and travelers, from the San and the Maasai of Africa to the Roma and homeless of Europe, can now be reached with mobile technologies, opening access to national educational opportunities, the global knowledge economy, and the information superhighway, reaching the marginal and the sometimes stigmatized. Historically and internationally, the role of national education systems in bringing nomadic communities into the sedentary mainstream is well established; mobile technologies make this much easier, necessitating perhaps more thought about the impact on their cultures.

Whether these are trends is debatable. When we look at individual communities rather than general trends, more evidence and experience are still needed.

2. Enriching Learning with Mobiles

Research and development in mobile learning have demonstrated that mobile technologies can enhance, enrich, and sometimes challenge and disrupt existing educational concepts and practices.

Broadly speaking, we can categorize these as making learning more contingent, authentic, situated, contextualized, and personalized, terms from the world of educational theory and overlapping in practice to some extent. *Contingent* means making learning responsive to the learner's situation rather than rigid and hard-wired. One example would be teachers with portable interactive whiteboards, or learners using mobiles to test ideas in the field. *Situated* and *authentic* refers to learning from meaningful activities in relevant places—for example, field trips in agriculture, architecture, archeology, geology, zoology, and so on; or internships and vocational placements for trainee community health workers, rural vets, game park wardens, primary school teachers, and first responders. *Contextual* means providing learning interactions, discussions, and content specific and meaningful to the learner's location, itinerary, and situation. *Personalized* means providing learning specific to each learner's own preferences, priorities, and habits. The mobile learning research community has exploited the increasingly powerful and robust mobile technologies to demonstrate how these aspects of learning can be realized.

These technologies are now widely available as retail technologies that run on the increasingly affordable powerful handsets and networks—still, however, largely limited to metropolitan and developed regions. Given a benign regulatory and financial climate, the obvious trend is that these types of learning will become increasingly available in developing regions and rural areas.

3. Motivating Learning with Mobiles

A third and universally recognized achievement, admittedly often subjective and unsubstantiated, is that learning with mobiles motivates learners, especially disengaged and disadvantaged learners. Interest and enthusiasm around mobiles continues unabated and is perhaps the most stable and visible trend. Teachers around the world have shared stories of their students *asking* to do school work using mobiles, a marked change.

4. Thinking About Learning with Mobiles

The final achievement of the mobile learning research and development community has been to challenge and extend theories of learning. This may seem largely academic, but these theories trickle down from researchers to lecturers to teachers, and into schools and colleges.

Everyone, including those outside formal education organizations, has a theory of education and learning—perhaps several, including those that are not particularly complex or rational, such as something like *content is king*, but it is important to have alternatives and improvements to these because such theories underpin everyone's actions and decisions.

This is an important issue, because as we use mobiles to take learning to communities and cultures unlike any of our own, we will encounter their local theories of learning and theories embedded in their traditions and cultures. These express their ideas about what where, when, why, and how to learn, and who to learn from; and the nature of their educational heritage and identity. The more diverse our global ecology of learning and its theories, the richer the opportunities we offer to other cultures and communities.

Looking Forward

It is difficult to pick out specific trends or detailed predictions. Technical capacity and coverage will continue to improve around the world, in different places in different ways. Moving toward scale and sustainability will accelerate the predominance of English at the continued expense of other global languages and, likely at the expense of many mother tongues and minority languages.

For similar reasons, the delivery of global content will dominate as the major educational format, most often on learners' own phones, and will be aimed mainly at the basic education and literacy curriculum. At the margins of these mainstreams, we will see other languages, formats, processes, and topics continuing to provide the evidence and inspiration needed to shape developments.

These predictions and trends are not, however, entirely the consequences of political, educational, social, and commercial factors; the capacity of bodies such as the Alliance to influence them at the point where these factors intersect could be decisive.

Session: [Diversity that is Deeper than the Digital Divide](#) (9/6, 9:30 – 10:30am)
Moderator: [Mike Trainum](#) (Life Access Technology Trust)
Panelists: [Dr. John Watters](#) (SIL International)
[Dr. Paul Kim](#) (Stanford University)
[Pierre Biscaye](#) (World Vision)
[Dr. Pat Brogan](#) (Fielding Graduate University)
[Lou August](#) (World Vision)

Panelists discussed how to increase global access to mobile technology and suggested that for the three billion people who live in developing countries to access mobiles, well-developed pedagogy must accompany the technology. Mike Trainum (Life Access Technology Trust) discussed the Shellbook Method of empowering communities around the world to create their own teaching and learning materials for 'life-critical' information. Shellbooks provide a basic structure around which materials can be built. Shellbooks are used, for example, to address public health issues. *Kande's Story*, published on Shellbook, has reached countries across Africa and provides a story-based, Biblical approach to AIDS prevention and care. Organizations like Life Access Technology Trust seek to partner with other groups to develop Shellbook apps so people can share and collaborate on materials.

Dr. John Watters (SIL) discussed the impact that language has on technology usage. The upsurge in mobile technology has already increased the number of languages spoken over telephones from a few hundred landlines used to thousands using cellphones. Yet, while 5,000 languages are in use around the world, only 120 languages are represented in technology. Language is an intrinsic part of all aspects of life and human identity and people can better relate to information that they hear in their mother tongue. Ideally, mobile devices could be used and understood in all communities, including those where minority languages are spoken.

Dr. Paul Kim (Stanford) emphasized the importance of localizing content and making it relevant to the specific community, not just through language but with local nuances. Researchers must consider whether their product is innovative locally or if it is only useful in their laboratories. They must create pedagogical models that tightly integrate technology with local needs and problems; partnering with local programs and universities can facilitate this integration. Lou August (World Vision) discussed the danger that technology can pose to certain cultural identities because of the increasing and overwhelming emphasis on English instruction and spread of Western ideals. In Zambia, for instance, only 2 percent of the Maasai community is literate. To counter the high illiteracy rate, youth are given mobile devices to first learn English and then the technology. Mr. August pointed out the importance of not condemning cultures and languages to obsolescence by sharing technology; "It would be a tragedy for humanity if these amazing cultures were lost because we have created a world where their cultures were no longer relevant."

One participant asked whether a focus on mother tongue learning inhibits employability in the larger society. Panelists responded that first becoming fully fluent in the mother tongue actually facilitates learning of major languages later on. A panelist also pointed out that major languages may be more useful where urban areas are growing, but that in Africa, for example, more people are living in rural areas now than in the past. Another participant asked about intellectual property rights. Panelists noted that copyrighting Shellbook material would prevent people from adapting the stories to their communities' needs.

Key takeaway points included the importance of localization and contextualization of materials. Technology should be user-friendly and sensitive to all languages, so that the adoption of technology does not result in the loss of cultures. Relevant tools and capacity building are prerequisites for peoples' involvement in creating educational materials, but once they are involved, people should take ownership of the process and be able to discuss issues of crucial importance to their communities.

Parking Lot Sessions Summary

To facilitate interactive dialogue and knowledge sharing, attendees were invited to participate in a series of Parking Lot sessions, a participatory activity that allowed attendees to host their own sessions to present and discuss their particular mLearning ideas and projects. The Parking Lot consisted of three consecutive 20-minute periods in which more than 20 different sessions were held at designated locations throughout the conference area (for a full list of Parking Lot session discussions, see Appendix B).

Dr. Lynn Nolan and Dr. Don Knezek of the International Society for Technology in Education (ISTE) introduced the session after the opening remarks on the first day of the conference and invited participants to post their discussion ideas about innovations or issues in the field of mLearning on the Parking Lot session boards in the lobby. Throughout the day, participants posted a diverse range of ideas, such as Kevin Cropper's (Peace Corps) discussion on how to improve collaboration and learn from other mobile-for-development communities (e.g., mHealth, mBanking, mWomen) and Elizabeth Wood's overview of the use and effectiveness of Worldreader Kits in Africa.

On the second day of the Symposium, participants and facilitators exchanged their ideas and opinions in a variety of formats throughout the Parking Lot sessions. Debashree Roy and Dr. Nils Geissler of GIZ, and Dr. Deepa Srikantaiah of GPE invited participants in their session to share and discuss ideas for improving student numeracy skills with the use of mobile technologies. Seventy percent of children in developing countries graduate from primary schools without the foundational numerical skills to progress through formal education. Participants and facilitators explored potential ways that mLearning can improve the quality and availability of learning opportunities for children in low-resource settings. Participants concluded that the easy-to-understand aspects of mobile technology inherently lend themselves to numeracy education and assessment, and should be explored and developed more by the mEducation community around the world.

Dr. Richard Rowe and Koffi Essien of Open Learning Exchange (OLE) presented the new USAID-supported Ghana Reads project during their session, "Ghana Reads: A Scalable Approach That Will Enable All Ghanaian Children to Enjoy Reading." They emphasized the importance of beginning not with tools, but with a clear set of goals and approaches for learning, approaches that engage students and their teachers together in new methods of learning, increase access to quality open learning resources (OLR), and then develop scalable tools required to achieve the goals of learning. The Ghana Reads' innovative approach to learning involves coaches in classrooms with videos of activity-based learning (ABL). Students and their teachers try this approach while being videotaped, then watch and learn from their own videos. Ghana Reads includes a multimedia Basic e-Learning Library (BeLL) using the RaspberryPi server, a 7" color Wi-Fi-enabled tablet, a projector, a printer, and a camera.

Steve Vosloo of UNESCO presented a draft of UNESCO's new Policy Guidelines for Mobile Learning. UNESCO is currently seeking input into these guidelines, which will be published at the UNESCO Mobile Learning Week (MLW) in February 2013. Mr. Vosloo convened a roundtable discussion concerning the guidelines to gather such input. Feedback and suggestions were provided by participants representing academia (Pennsylvania State University and the University of Wolverhampton), private sector mobile practitioners, the ITU, and the International Institute of Mobile Technologies. Several important issues and suggestions were raised from the various perspectives at the table. UNESCO invites Symposium participants, as well as those involved in mobile learning initiatives around the world, to read the full draft of the guidelines and provide additional feedback.

At the conclusion of the Parking Lot sessions, participants and facilitators left with new perspectives of how mLearning projects are currently being implemented, how they can be improved, and how they

could reach new audiences throughout the mEducation community. The mEducation Alliance encouraged participants and facilitators, as well as the wider mEducation community, to continue the dialogue and collaboration beyond the Symposium.

Breakout Sessions Day 2

Session 4.a: [Hands-on Workshop: Stanford Mobile Inquiry-based Learning Environment \(SMILE\) for the Seeds of Empowerment](#) (9/6, 1:30 – 2:30pm)

Panelists: [Dr. Nari Kim](#), [Donggil Song](#), and [Dr. Paul Kim](#) (Seeds of Empowerment)
Stanford Mobile Inquiry-based Learning Environment (SMILE) for the Seeds of Empowerment
Tonya Brilon (Marvell)

This hands-on workshop focused on the Stanford Mobile Inquiry-based Learning Environment (SMILE) and the philosophy and design behind its development. Dr. Paul Kim (Seeds of Empowerment) told audience members that SMILE is not a technology or device, but rather a pedagogy aided by technology that has proven effective in classrooms around the world. SMILE is an affordable solution in low-resource environments.

Aided by software designed for mobile phones (smartphones and ad hoc) and tablets, SMILE combines technology with an inquiry-based learning approach that advances knowledge as students use critical thinking skills to generate their own questions. The development of SMILE was a response to the observed ineffectiveness of the rote-teaching model, the dominant method of teaching around the world. SMILE was designed to foster student inquiry to challenge the rote-teaching method and to provide evidence of learning in the classroom.

Dr. Paul Kim presented examples of SMILE's introduction and implementation in classrooms in Argentina, India, Indonesia, and Korea. In each context, SMILE challenged students to create questions from the learning materials to pose to their classmates. As students took pictures of maps, graphs, and hand-drawn pictures with their phones, they became competitive in their attempt to come up with the most difficult questions. Teachers managed and facilitated the activity, generating discussion and debate while assessing and identifying student weaknesses.

Participants in the hands-on workshop received mobile phones and tablets running SMILE software and were invited to create their own competition. They worked in small teams and pairs, using the learning materials at their table to come up with their own challenging questions for their peers.

Panelists circulated around the room answering questions and helping participants navigate the devices and software. Participants became more competitive as the activity progressed and watched as their completed questions filled the screen behind the podium. Once all of the questions had been collected, participants answered the questions on their devices and rated the level of difficulty. Dr. Paul Kim then announced the scores and the winners of the activity and asked them to explain the process they used for creating the questions.

Key takeaway points included the importance of considering the learning environment and teaching methods when developing mEducation initiatives. Conducting research and providing evidence of learning is essential to understanding the effectiveness of such projects.

Session 4.b: *mReading: e-Readers and Visual IRI (9/6, 1:30 – 2:30pm)*

Facilitator: [Mike Trucano](#) (World Bank)

Presenters: [Zev Lowe](#) (Worldreader)

Worldreader Kits

[Dr. Simon Richmond](#) (EDC)

[Visual IRI: Pico Projectors Enable a New Instructional Medium to Teach Literacy](#)

This session featured two mobile technologies that enable children to access reading materials and lessons in low-resource settings. Zev Lowe began Worldreader’s presentation with a discussion about the lack of access to books in Sub-Saharan Africa, where 20 percent of a billion children do not have books of their own. Worldreader is using e-readers to turn schools into environments where children have books to read. Currently, Worldreader operates in Kenya and Ghana, and will expand to Tanzania and Uganda over the coming months. In those areas that have received e-readers, reading has become a part of daily life. African textbooks and storybooks that reflect children’s daily lives have enabled them to adapt to and become accustomed to the e-reader technology. Worldreader also provides children with the Hardy Boys series, serving as a gateway to other international books. The use of local books helps reduce any hesitation about using the device or technology. In terms of results, this program affected the primary level more than with older children, which mirrors general trends in reading. Worldreader is starting to use the Early Grade Reading Assessment (EGRA) to monitor and evaluate success. When considering a cost effective strategy to go to scale, Worldreader bundled e-reader kits to serve three to four classrooms simultaneously.

Dr. Simon Richmond (EDC) discussed the development of Visual Interactive Radio Instruction (IRI). IRI is used in more than 30 countries and emphasizes pedagogy over technology. The radio platform has limitations as lessons broadcasts at certain times would be interrupted by competing radio shows or power outages, resulting in missed lessons. EDC began using mp3s and players when they became accessible. With technology, teachers used IRI when they wanted to rather than being dependent on radio broadcasts. In Malawi, EDC tested Visual IRI, which uses Pico projectors, two computer speakers, and a solar panel for charging the Pico’s battery. All of these lessons were loaded on SD cards in the Pico. The buttons on the Pico are similar to those on a cell phone. PowerPoint presentations were used and the screen is simply paper taped to the chalkboard. Visual IRI uses stages of exercises that build upon each other. For example, a math lesson would include an overview of the topic and interactive group and individual exercises. Students then mark their own work. The test in Malawi was a quick proof-of-concept evaluation. Twenty lessons, ten IRI and ten Visual IRI were implemented. The visual IRI group showed significantly improved knowledge in comparison to the regular IRI group. Now that IRI is visual as well as sound-based, the up-dated lessons are necessary.

Key takeaway points included the importance of partnerships in order to take advantage of technologies that are rapidly decreasing in cost, and the development of reading materials reflective of local culture to make technology less intimidating for those who have not experienced it before. Presenters described how e-readers and visual IRI provide reading lessons in a manner that is more cost effective than providing books.

Session 4.c: [mYWD: Shaping the Collaboration for mYWD](#) (9/6, 1:30 – 3:00pm)

Facilitators: [Linda Raftree](#) (Independent Consultant)

Mobiles for Education Alliance, Mobiles for Youth Workforce Development (mYWD)

Maria Brindlmayer (JBS International)

Communities of Practice: Good Practices: What Works?

Linda Raftree talked about the Mobiles for Education Alliance's establishment of a working group on Mobiles for Youth Workforce Development (mYWD) in partnership with The MasterCard Foundation to share ideas and evidence and complete a landscape review by July 2013. The landscape review will include a literature review, an online survey, and other elements. Ms. Raftree hopes to look at the interactions between gender and youth workforce development, especially mYWD. In many places, women have limited access to mobiles and gender-related issues with employment exist. The gender gap may be closing, however, especially for youth. A variety of factors affect mYWD programs, such as electricity, Internet connectivity, language, gender, culture, literacy, education levels of participants, and degree of poverty or marginalization.

Maria Brindlmayer (JBS International) talked about the requirements of a successful community of practice. These include having a coordinator who can drive a community, especially at the beginning, and who can bring new people into the community. A common purpose, regular interaction, a good Website, and incorporation of ideas from other sectors are also vital. Ms. Brindlmayer provided advice on building successful online communities. Such communities take time to solidify; starting small with a few committed members is effective.

Participants split into two smaller groups and discussed the new mYWD working group. Participants reported that they liked participating in working groups when they were well organized and had a clear mission and parameters. They also liked the opportunity to get different perspectives, bring people of diverse backgrounds together, and have a venue for brainstorming. Participants disliked working groups when the group had unclear goals or lacked focus and limited commitment on the part of some members. They also found that too frequent communication from the group could be overwhelming.

The group discussions resulted in the following priorities for this mYWD working group: (a) the group should use best practices and case studies; (b) it should grow and build energy organically; and (c) it should raise the profile of Youth Workforce Development in general. The research done on mYWD should be integrated with other research on youth so that it is not stand-alone. The group hopes to cross sectors, rather than create another barrier between areas such as health, education, and workforce development. The group could emphasize that mobiles are useful for learning outside of the classroom. The group should get youth involved as well, since they can give their perspectives and help the group work across sectors more effectively. Youth also tend to learn from and listen to their peers.

Key takeaway points included the importance of innovation, skills training, and opportunities for unemployed youth such as volunteering and interning. Participants wanted to learn how to engage the private sector and how youth can develop into active, financially conscious citizens. Participants wondered whether the focus of the group should be more on youth than youth workforce development, and how the group can create sustainability. They also considered the appropriate use of mobile technology and the potential of using mobiles for doing competency assessments and certificates. The first Learning Series event was scheduled for October 15, 2012.

Session 4.d: [In Focus: Partnering for Basic Education Quality](#) (9/6, 1:30 – 2:30pm)
Facilitator: [Dr. Lynn Nolan](#) (ISTE)
Presenters: [Dr. Mary Clisbee](#) (L'École de Choix/The School of Choice)
[Luke Filose](#) (Intel)
[Dr. Kari Stubbs](#) (BrainPOP)
[Charles Callis](#) (Waterford Institute)

This session focused on a partnership case study of the L'École de Choix in Haiti.

Dr. Mary Clisbee, principal of L'École de Choix (The School of Choice), discussed the school and mission to instill dignity, self-respect, and self-esteem in children in Haiti. Limited access to technology, textbooks, and materials, and lack of meals and snacks exacerbate learning conditions in Haiti. L'École de Choix provides students with a quality education by providing qualified teachers, a safe environment, meals, clean water, and first-rate technology resources to support learning objectives. The curriculum focuses on communications and leadership skills. Students receive instruction in Creole, French, and English.

Luke Filose spoke about the Intel Education Service Corps (IESC). IESC installed 35 computers with software, plus a classroom server, teacher laptops and projectors, and a one Mbps broadband Internet connection. The software includes Waterford Early Learning Software (English literacy, math, and science) and BrainPOP software to empower teachers.

Dr. Kari Stubbs explained BrainPOP's involvement in the Intel Learning Series Alliance. BrainPOP hosts digital content such as movies, quizzes, and interactive features that are available online via computers and mobile applications. BrainPOP donated a two-year subscription that includes access to BrainPOP Jr., BrainPOP ESL, BrainPOP Français, and BrainPOP Español to L'École de Choix. This past spring, BrainPOP received over 3,000 logins from the school.

Charles Callis spoke about the Waterford Institute's role in the Intel Learning Series Alliance providing curricula to L'École de Choix. Waterford Early Learning focuses on literacy and numeracy education for four- to twelve-year-old children. Mr. Callis emphasized that local commitment and technical experience implementing technology solutions are both critical in successful programming.

Facilitator Dr. Lynn Nolan (ISTE) addressed questions. Although attendees were urged not to view this partnership as a replicable model, the L'École de Choix illustrates the possibilities and opportunities that can arise from an effective partnership. This year, student enrollment included youth who receive aid from local agencies. In the next year, students will likely come from door-to-door recruitment. Working in a context such as Haiti involves connectivity challenges, especially for students in remote locations. BrainPOP was designed with the flexibility to be accessible to students in various settings. Even when access to BrainPOP over the Internet is not possible, the local printed version of the BrainPOP curricula is possible. The Waterford Institute provides curricula and flexible deployment models appropriate in resource-poor environments. Schools follow the Haiti National Curriculum which is taught primarily in French. Students also learn Creole and English so they have the option to pursue educational opportunities elsewhere.

Key takeaway points included the dynamic partnership building process involving collaboration on many fundamental levels used by L'École de Choix, Intel, BrainPOP, and the Waterford Institute. By providing computer technologies, curricula, access to online content, and a safe school environment this collaboration supports quality education to youth in Haiti.

Session 4.e: *Mobiles for System Strengthening: Moving Forward with Mobile Projects and Policies* (9/6, 1:30 – 2:30pm)

Presenters: Jean-Claude Balmes (Agence Française de Développement [French Agency for Development])

[Public/private partnership to promote ICT in Sub-Saharan Africa](#)

[Steve Vosloo](#) (UNESCO)

[The UNESCO Policy Guidelines on Mobile Learning](#)

Jean-Claude Balmes (Agence Française de Développement) opened the session by outlining three main challenges in education in French-speaking African countries. The huge numbers of out-of-school children and illiterate adults have created challenges to education access. Assessments reveal the poor quality of primary education; few pupils achieve the necessary skill levels to reach standards for proficiency. Higher education also suffers from poor quality and current job markets provide few employment opportunities for those who graduate. To address these challenges, the French Agency for Development has been trying to set up a working group that includes private sector companies like Siemens and Ericsson, international organizations like UNESCO, and major NGOs in the region. The working group shares strategies, facilitates networking, and encourages partnerships on projects. The group emphasizes an initial assessment of the context and needs of project participants as the basis for appropriate technical solutions rather than the other way around.

Steve Vosloo (UNESCO) then presented the goals, content, and policy recommendations for national policy makers in the UNESCO document, *Policy Guidelines for Mobile Learning*. The document has two main goals: (a) raising awareness of the value of mobile learning (e.g., mobile learning extends the reach and equity of education, personalizes learning, provides immediate learning and assessment, builds student communities, and feeds information upwards for analysis) and, (b) recommending policies (e.g., update policies created before mobiles, optimize open educational resources, train teachers to advance learning through mobile technologies, promote the responsible use and not just the acceptable use of mobile technologies, and address negative social attitudes about mobile learning through dialogue and leadership).

While the Guidelines provide implementation models and address issues related to adoption at a national level, Mr. Vosloo emphasized that they do not require wholesale replacement of national information and communication technology (ICT) policies, but rather encourage governments to consider mobiles in their review of existing or design of new policies.

Discussion began with details of the pending release of the document in February 2013 during the UNESCO Mobile Learning Week. One participant noted that a key missing link is program leadership from administrative mechanisms and education boards at the district level. Another raised the need for a broader statement on resource allocation and funding in the access and equity section. This led to questions related to both presentations: the need to use private/public partnerships when government resources are unavailable and the need for guidance. Mr. Balmes emphasized the importance funding agencies place on sustainability when deploying private-public partnerships. He mentioned the need to localize the guidelines and the need for guidelines to address private actors.

Key takeaway points included: (a) the need for partnerships, especially when facing limited resources; (b) the necessity of identifying ecosystem needs before appropriating technology solutions; and (c) UNESCO's Policy Guidelines for Mobile Learning and the goals of raising awareness of the value of mobile learning and providing policy recommendations for mobiles.

Mobiles for Youth Workforce Development Overarching Summary

Background

The mEducation Alliance recognizes that the increasing ubiquity of mobile phones and the use of other mobile devices, such as e-Readers, tablet computers, flash memory, and micro projectors provide valuable opportunities to support high-impact workforce development programs in developing countries. The Mobiles for Youth Workforce Development (mYWD) Working Group is a collaborative initiative in partnership with The MasterCard Foundation. The mYWD Working Group seeks to collectively engage people interested in youth development, workforce skills training, information and communication technology (ICT) for employability, and mobile application development. In addition to an ongoing virtual community of practice, this initiative includes several activities: (a) four Learning Series events to encourage cross-fertilization of research and best practices, (b) a landscape review of the mYWD field, and (c) promotion of the mYWD track at the 2012 mEducation Alliance International Symposium.

The Working Group (<http://www.meducationalliance.org/group/mobiles-youth-workforce-development>)

The mYWD Working Group is a community of practice within the mEducation Alliance dedicated to exploring the use of mobile technologies to increase young peoples' access to employment and opportunities for workforce skills development. Programs of interest to the working group include job matching applications, vocational and soft skills trainings, micro-work opportunities, and projects that connect small-scale producers to value chains. The overarching purpose of this working group is to expand the research base around what works in mobile technology for youth workforce development. Four objectives guide the efforts to accomplish this:

- Establishing a comprehensive, shared understanding of current activities and emerging trends in the use of mobile technologies for youth workforce development programming;
- Convening practitioners and specialists who are advancing the field to identify best practices;
- Developing and disseminating publicly available learning products to promote continual knowledge-sharing; and
- Offering a platform and supportive space for working group members to discuss, share, and learn from one another.

The Learning Series

The mYWD initiative includes four events, the first of which was held October 15, 2012 in Washington, DC. The Learning Series events provide a forum where people interested in mYWD can share ideas, provide information on innovative initiatives, discuss effective strategies, and identify challenges. Each event will address a relevant topic (e.g., gender) in the field of mobiles for youth workforce development and produce a resource meant to assist practitioners working in the field, such as a toolkit, guide, or best practices document. The information gathered at Learning Series events will also inform a comprehensive mYWD landscape review. The Learning Series will engage a diverse audience of interested practitioners, researchers, private sector representatives, and donors in the discussion of best practices and lessons learned at the nexus of mobile technologies and youth workforce development.

The Landscape Review (expected completion summer 2013)

This comprehensive study will rely on a literature review, key informant interviews, and an online survey to answer critical questions about the use of mobile technologies in youth workforce development:

- Which organizations are at the forefront of using mobiles to help overcome the barriers to employment for youth?
- What type of programming is being implemented and how?
- How do gender differences affect access to youth workforce development services?
- What innovations in other sectors (e.g., mHealth) can be applied to mYWD?

mYWD at the mEducation Symposium

The mYWD track of the Symposium helped participants learn from one another and promote a nascent field. The first day comprised three diverse panel presentations on current mYWD projects: (a) Nokia Life software that allows inexpensive mobiles to look and operate more like data-enabled phones, (b) a basic literacy curricula delivered through mobile devices, and (c) simple systems for publishing educational content to mobile devices. The second day provided a space for people interested in the mYWD Working Group to set priorities, discuss the overall direction of the Working Group, and gather information for the Landscape Review and Learning Series events.

The core theme of the mYWD track was the vast opportunity offered by mobile technologies. The presentations and workshops provided indicators of this potential. Several presenters described the ubiquity of mobile devices. Lauren Dawes from GSMA stated that over five billion connections exist in the developing world and Bhanu Potta from Nokia noted that one billion mobile users have data plans. Mr. Potta stressed the importance of connecting people to data: data access leads to functionality that is far greater than either voice or SMS services. The preeminent value youth give to their mobile phones was another indicator that mobiles have the potential to make a profound global impact. GSMA's *Shaping the Future* report, which included statistics on mobile use among young people in Morocco, Ghana, Uganda, and India, found that youth rank mobiles as their most important asset, above both clothing and shoes.

Despite the potential, low-income and marginalized youth face multiple barriers in the access of mobile technologies. Several presenters discussed ways to improve access to data plans and applications. Praekelt's Jonathan McKay described partnering with mobile network operators to reduce or eliminate data charges. Praekelt offers its YoungAfricaLive and Ummeli programs free of charge to users in South Africa through a partnership with Vodafone. EDC's Scott Isbrant also shared an example of the benefit of working with private sector stakeholders. Mr. Isbrandt spoke about encouraging mobile kiosk owners to pre-load educational content onto micro SD cards, thus allowing the community to access content after the EDC PAJE-Nieta program has ended. Another example of increasing access is PAJE-Nieta's open source mobile content delivery platform, Stepping Stone. Open source technologies were discussed in several sessions as low or no-cost options that can be easily modified. One discussant identified open source technologies as a factor that facilitates the successful implementation of mYWD programs.

Community was also an important theme of the mYWD track. Mr. McKay explained that Ummeli was designed as a portal to help build community, not as an individual tool. The program gives young people a way to connect with their community through meaningful work: employment, internships, or volunteerism. Participants noted that families, the basic units of community, often share one mobile device. mYWD program designers need to tailor project components to families, by targeting parents in outreach activities, for example, even when the actual program is youth-focused.

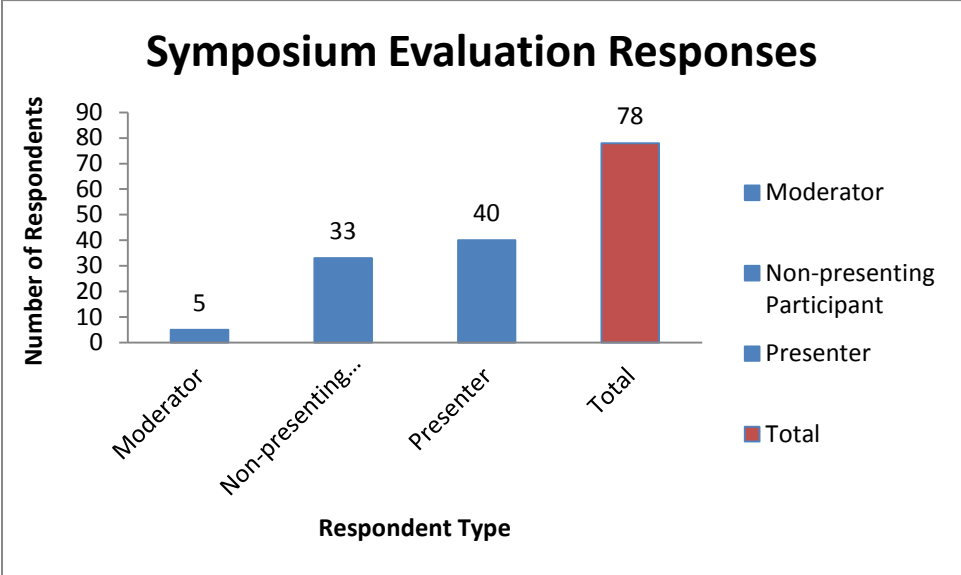
Finally, participants were keenly interested in the question of scaling. Partnerships, such as Praekelt's relationship with Vodafone, are a way to impact larger numbers of youth. While ministries of education and schools are also potential partners, some argued that these partnerships would have little impact on out-of-school youth. Participants viewed the abundance of pilot projects as a hindrance to scaling. One participant noted that Portugal's Magellan Initiative is an example of a successfully scaled program.

Conclusion

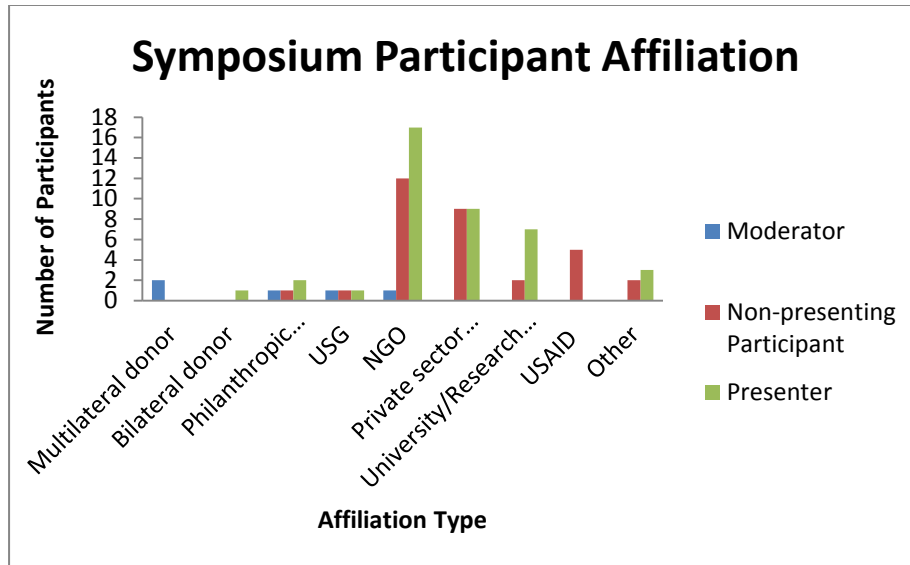
The mEducation Symposium successfully launched the mYWD Working Group. Collaboration session participants identified the group's initial priorities: learning about innovations in the field, sharing best practices and evidence, working with stakeholders in other sectors (e.g. mHealth), and engaging youth as members. The presentations in the mYWD track closely followed these priorities by providing information on innovative projects, evaluation and evidence, and mEducation initiatives. The rich discussions reflected the Working Group's interests in issues of scale and sustainability, private sector partnerships, and mobile training certification. These sessions contributed substantially to the Landscape Review and sparked ideas for Learning Series event topics. *Innovations in mYWD*, a top interest of the Working Group and a focus of the entire track, will be the topic of the first Learning Series event. The presentations made it clear that mobiles are the future of workforce development in the developing world. The mYWD Working Group embraces this vision and will act as a community of practice to facilitate innovation and information sharing in this burgeoning field.

Feedback from Symposium Participants

Data presented in this section were collected anonymously through paper-based surveys administered at the end of the Symposium. Seventy-eight Symposium participants, representing approximately 40 percent of the Symposium’s total 200 participants, completed the surveys.



The Symposium brought together many organizations in an effort to help attendees initiate new partnerships that will further work in the field. Participants drew from diverse backgrounds and included representatives from some of the most prominent donor agencies, government organizations, highly respected NGOs and foundations, vetted pool of project implementers, professional associations in both educational and mobile technology, and private sector organizations. Of the 78 participants who completed the feedback survey, the largest portion was affiliated with NGOs, followed by private sector organizations and research-oriented institutions.



Limitations

As with any survey, there are limitations that are important to note. First, it should be noted that an incentive was given to encourage the completion of feedback surveys. Any non-U.S. government participant who completed a feedback survey was entered into a drawing to win an Intel Classmate personal computer. Due to the regulations that prevent U.S. government employees from receiving gifts from outside sources, U.S. government staff were not eligible to participate in the drawing which may have discouraged their completion of the feedback survey. In an effort to encourage fresh feedback and accountability, and to discourage double counting, surveys were completed in person on-site and collected individually. While this helped ensure one person did not fill out multiple surveys, it did limit the feedback to those participants who attended the final session on the last day.

General Impressions

Feedback on the Symposium's overall usefulness was overwhelmingly positive.

Overall, how useful did you find the Symposium?

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	3	2	0	0	0	5
Non-presenting Participant	14	17	2	0	0	33
Presenter	25	14	1	0	0	40
Total	42	33	3	0	0	78
Frequency	53.2%	43%	3.8%	0.00%	0.00%	

When participants were asked about the specific concepts and ideas they thought would be useful in their own work, or that they would share with colleagues, many responded that lessons about exploring, developing, and managing public/private partnerships for greater scale, impact, and

sustainability were particularly useful. Responses reflected participants’ strong interests in networking and forging new relationships to foster future collaborations, explore new ideas and innovations, share knowledge and best practices, and develop greater effectiveness and efficiency in project design and implementation.

Participants’ responses also reflected the desire to learn more about outcomes, successes, challenges, and trends within the mLearning field, especially those regarding reading and youth workforce development. Some responses indicated an appreciation for learning about how mobile applications are currently being developed and used in low-resource environments, and how they can be developed to assist marginalized groups such as rural populations and students with special needs. A number of respondents noted the array of options the simpler technologies offer, and that the power is in creativity. One respondent said that s/he gained:

A re-newed look at ‘simple’/available technology in both teacher training and early-grade literacy—the mobile phone!

Follow-up Content Areas

Participants were asked to suggest follow-up content areas for future mEducation Alliance events. Many participants recommended providing more sessions on content development and localizing content to serve local languages, disadvantaged communities, and low-resource environments. Responses also reflected a general desire for emphasis on supporting teachers through training and professional development initiatives.

Participants also expressed the desire for more sessions that present evidence and address the current evidence gap within the mEducation community. Many suggested more focus on creating partnerships (i.e., funding) and fostering existing collaborations. Several participants proposed that these partnerships include the wider mobiles for education community, such as mHealth, mBanking, and mWWomen, for the education community.

Feedback on Symposium Sessions

Symposium breakout sessions were grouped into six themes: *Mobiles for Reading, Mobiles for Youth Workforce Development, System Strengthening, Public/Private Partnerships, Assistive Technology, and Crisis and Conflict*. Participants could attend any session in the breakout-session blocks. Twenty breakout sessions were held over the course of the two-day event. Therefore, the following responses represent feedback on principal thematic areas rather than on specific sessions.

As shown in the table below, participants generally perceived the breakout sessions to be useful.

*Overall, how would you rate the Symposium **Breakout Sessions**?*

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	1	4	0	0	0	5
Non-presenting Participant	12	14	7	0	0	33
Presenter	21	17	2	0	0	40
Total	34	35	9	0	0	78
Frequency	43.58%	44.87%	11.53%	0.00%	0.00%	

Parking Lot

Participants were asked to rate the usefulness of the Parking Lot sessions. Held during the second day of the Symposium, this participatory activity was a new addition, designed to engage participants and encourage them to propose and lead their own discussions, share reports of projects and lessons learned, receive feedback, and encourage interactive discussion among participants.

*If you participated in the **Parking Lot**, how helpful did you find these sessions?*

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	1	1	2	0	0	4
Non-presenting Participant	10	11	5	0	0	26
Presenter	11	11	4	1	0	27
Total	22	23	11	1	0	57
Frequency	38.59%	40.35%	19.29%	1.75%	0.00%	

The tables below show participants' overall ratings of the workshop's specific focal areas: *Mobiles for Reading, Mobiles for Youth Workforce Development, System Strengthening, Public/Private Partnerships, Assistive Technology, and Crisis and Conflict.*

*If you attended a breakout session in the **Mobiles for Reading track**, how would you rank this track's sessions overall?*

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	2	0	0	0	0	2
Non-presenting Participant	10	11	1	0	0	22
Presenter	9	17	3	1	0	30
Total	21	28	4	0	0	53
Frequency	39.62%	52.83%	13.20%	1.88%	0.00%	

If you attended a breakout session in the **Mobiles for Youth Workforce Development track**, how would you rank this track's sessions overall?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	2	1	0	0	0	3
Non-presenting Participant	2	10	3	1	1	17
Presenter	11	11	3	0	0	25
Total	15	22	6	1	1	45
Frequency	33.33%	48.88%	13.33%	2.22%	2.22%	

If you attended a breakout session in the **System Strengthening track**, how would you rank this track's sessions overall?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	1	0	1	0	0	2
Non-presenting Participant	2	5	6	0	1	14
Presenter	3	14	3	1	0	21
Total	6	19	10	1	1	37
Frequency	16.21%	51.35%	27.02%	2.70%	2.70%	

If you attended a breakout session in the **Public/Private Partnerships**, how would you rank this track's sessions overall?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	1	0	0	0	0	1
Non-presenting Participant	5	9	8	0	0	22
Presenter	11	9	4	0	0	24
Total	17	18	12	0	0	47
Frequency	37.17%	38.29%	25.53%	0.00%	0.00%	

If you attended a breakout session in the **Assistive Technology**, how would you rank this track's sessions overall?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	0	0	0	0	0	0
Non-presenting Participant	2	7	3	0	0	12
Presenter	4	6	2	0	0	12
Total	6	13	5	0	0	24
Frequency	25.00%	54.16%	20.83%	0.00%	0.00%	

If you attended a breakout session in the **Crisis and Conflict**, how would you rank this track's sessions overall?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	0	0	0	0	0	0
Non-presenting Participant	3	2	3	2	0	10
Presenter	7	4	2	0	0	13
Total	10	6	5	2	0	23
Frequency	43.47%	26.08%	21.73%	8.69%	0.00%	

Session Relevance and Applicability

Participants' general opinions were also sought on other characteristics of the various Symposium sessions; namely, general relevance to work, active participation in the Symposium, exposure to new ideas and approaches, deepening understanding, and applicability to participants' jobs. Results indicate that the sessions were useful in relation to the relevance of participants' work, as well as providing exposure to new ideas and approaches, and enabling participants to apply ideas to their jobs.

*Overall, how useful were the workshop's sessions in relation to the general **relevance to your work**?*

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	2	2	1	0	0	5
Non-presenting Participant	16	14	2	1	0	33
Presenter	25	14	1	0	0	40
Total	43	30	4	1	0	78
Frequency	55.12%	38.46%	5.128%	1.28%	0.00%	

*Overall, how useful were the workshop's sessions in relation to **active participation**?*

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	3	1	0	0	0	4
Non-presenting Participant	10	14	5	1	0	30
Presenter	20	12	5	0	0	37
Total	33	27	10	1	0	71
Frequency	46.47%	23.94%	14.08%	1.40%	0.00%	

Overall, how useful were the workshop's sessions in relation to **exposure to new ideas and approaches?**

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	2	3	0	0	0	5
Non-presenting Participant	17	12	3	1	0	33
Presenter	23	13	4	1	0	40
Total	42	27	7	2	0	78
Frequency	53.84%	34.61%	9.85%	2.56%	0.00%	

Overall, how useful were the workshop's sessions in relation to **deepening your understanding of issues related to your responsibilities?**

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	1	4	0	0	0	5
Non-presenting Participant	7	16	5	3	1	32
Presenter	16	15	6	3	0	40
Total	24	35	11	6	1	77
Frequency	30.76%	44.87%	14.10%	7.79%	1.29%	

Overall, how useful were the workshop's sessions in relation to **enabling you to apply selected ideas to your job?**

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	2	3	0	0	0	5
Non-presenting Participant	9	14	8	1	0	32
Presenter	18	15	6	1	0	40
Total	29	32	14	2	0	77
Frequency	37.66%	41.55%	18.18%	2.59%	0.00%	

Demo/Poster Session

During the second day of the Symposium, several organizations, innovators, and implementers displayed and discussed samples of their work and findings through posters or demos. Participants were invited to visit the demonstration area to pose questions to presenters and take part in a hands-on and in-depth look at different perspectives and approaches to mLearning initiatives from around the world.

If you participated in the **Demo/Poster Session**, how useful did you find it?

Respondent	Very useful	Useful	Neutral	Not that useful	Useless	Total
Moderator	1	2	0	0	0	3
Non-presenting Participant	4	8	10	0	0	22
Presenter	12	13	6	3	0	34
Total	17	23	16	3	0	59
Frequency	28.81%	38.98	27.11	5.08%	0.00%	

Regarding the event’s logistical coordination and organization, the feedback was also positive.

Overall, how would you rate the Symposium’s **Logistics and Coordination**?

Respondent	Excellent	Good	Neutral	Not relevant	Poor	Total
Moderator	3	1	1	0	0	5
Non-presenting Participant	12	13	2	0	0	27
Presenter	19	16	5	0	0	40
Total	34	30	8	0	0	72
Frequency	47.22%	41.66%	11.11%	0.00%	0.00%	

Many of the open-ended comments and suggestions concerning logistics indicated that participants appreciated the time devoted to networking, and the Symposium’s overall focus on partnership building. Several respondents found the format of the breakout sessions effective and engaging, but some participants expressed regret for not having enough time to attend more of these sessions. Regarding access to presentation materials and knowledge sharing with the wider mEducation community, several commenters expressed concern for those who could not attend the event—especially youth—and suggested providing more outreach and development of online resources through the mEducation Alliance website and other social media platforms.

Appendix A

Welcoming Remarks

Eric Postel, Assistant Administrator for the Bureau of Economic Growth, Education and Environment, USAID

Good morning! On behalf of USAID, I am very pleased to add my own welcome to you at this second annual mEducation Alliance International Symposium. In looking through the program for this two-day gathering, I was impressed by the diverse organizations and innovative uses of mobile technologies for education that will be showcased. USAID is very thankful to the organizers and sponsors for helping to pull together such a compelling and exciting program.

As you know, the main theme of this year's symposium is Partnering for Scale and Impact. President Obama, Secretary of State Clinton and USAID Administrator Shah have all made it clear that they consider partnerships, with both traditional and non-traditional stakeholders, the private sector, NGOs and academia, to be essential aspects of effective United States governance. But of course we shouldn't partner just for partnership's sake: the partnership should increase both project scale and project impact. To achieve impact in the education sector, we surely need to utilize innovation, science and technology. Hence, the theme of this conference.

Speaking of innovation, I'm pleased that the mEducation Alliance embraces a broad definition of 'mobile' -- it covers a range of technologies. We're excited that so many people, including many of you here today, are working to use mobile technologies, or to develop new mobile applications, to improve education efforts around the world. For example, technologies to monitor student progress, report teacher absenteeism real-time or facilitate the delivery of instructional material through a variety of media all have the potential to significantly change the education landscape as we now know it.

As with all endeavors, it is necessary to prove what works or what does not work and clarify why. There is still a lot we have to learn about effective uses of technology for education, particularly in the low-resource settings where we work. While it is absolutely critical to test new hypotheses about technology adding value to education efforts, it is equally important to dedicate resources for robust and independent evaluations of promising initiatives. In your own work, is there evidence that the projects you are exploring and developing can raise reading scores, for example? When compared to other education interventions, are they cost-effective, sustainable and appropriate for their context? We hope that all of us can come together to identify key evaluation questions and guidelines for interventions in the field.

While we've made great strides in education, including getting more children, particularly girls, into school and moving literacy rates higher among all age groups, there are still pressing inter-related challenges in many developing countries, particularly those in sub-Saharan Africa and South Asia. These challenges cannot be adequately addressed by a single donor or government. Responding to them requires the involvement of a variety of groups and people involved in education, including the institutions and leading thinkers represented in this hall today, working together in partnership.

The importance of partnership is clearly articulated in USAID's Education Strategy. This document serves as the roadmap for the more than \$500 million we spend every year on education in developing countries. If you're not already familiar with our Strategy, it contains three decidedly ambitious goals: improving the reading skills for 100 million children in primary grades, improving workforce skills, and increasing equitable access to education for 15 million children in crisis- and conflict-affected

environments. Endeavors such as the mEducation Alliance, and the opportunities for us to collaboratively learn from the organizations you represent, will help us achieve these goals.

One of the Alliance's nascent Working Groups, *Mobiles for Reading*, is also a signature component of our *All Children Reading Grand Challenge for Development* competition. This competition is a joint undertaking of AusAid, World Vision and USAID. It is designed to identify and catalyze worldwide innovations, including those involving science and technology, to advance early grade reading efforts, particularly in developing countries.

This Friday, September 7th, we hope that many of you will join us for International Literacy Day activities. These will include our spotlighting the 32 finalists from the first round of this competition. Some of these finalists are in the audience today because their innovations are focused on technology-based interventions in support literacy.

In support of the competition, *Mobiles for Reading* is convening a working group to promote knowledge-sharing and catalyze promising practices in the field. We hope that you will explore opportunities to participate in this working group and others that will be formed by the Alliance including one being supported by Mastercard Foundation on Youth and Workforce Development

As you interact with leading practitioners in the field during the symposium, we hope you will explore opportunities by becoming actively engaged in initiatives such as the mEducation Alliance. If your organization has human, financial or technical resources to contribute to the Alliance's work, we would welcome conversations with you about this. For example, I know one ambitious activity of the Alliance will be to identify and pool resources for rigorous and independent evaluations of promising, scalable educational technology use. If this is an area of interest, please speak with mEducation Alliance Steering Committee members at this forum.

On that final introductory note, I would like to reiterate USAID's thanks to all the organizers and sponsors and to welcome all of you to this symposium! Let the learning and networking begin!

Appendix B

Parking Lot Session Discussions

Mike Dawson – Paiwastoon

Betsy Beaumon & Kristina Pappas – Benetech, “All Children Reading”

Dr. Nils Geissler – GIZ, “Numeracy and Mobile Learning”

Jim Teicher – CyberSmart! Africa

Hall Davidson – Discovery Education, “Best Mobile Apps” and “Ways to Use ‘Dead’ Phones, Carmeras and Websites to Create Local Content”

Linda Raftree (independent consultant) & Maria Brindlmayer (JBS International), “Mobiles for Youth Workforce Development”

Kevin Cropper - Peace Corps

Richard Rowe – Open Learning Exchange

Dr. Mary Clisbee – L’Ecole de Choix/The School of Choice, “Strategies to Engage Parents in the Use of Technology in the Classroom”

Elizabeth Wood – Worldreader & Mark Shoebridge – biNu, “E-readers”

Dr. Nils Geissler – GIZ & Carole Robertson-Fenn – i-Ed Inc

James Stiles & Prof. Hilary Janks – Uninversity of Witwatersrand, Johannesburg

Isabelle Duston – Education Apps for All

Carmen Strigel & Mike McKay – RTI International, “Tangerine Class”

Anthony Bloome – USAID, “Mobiles for Reading”

Matt Wennersten – EZ Vidya

Zev Lowe – Worldreader, “Yazmi Tablet” and “m-reading demo Worldreader App on biNu”

Norbert Rennert – SIL International

Lynn Nolan – ISTE

Steve Vosloo – UNESCO, “UNESCO’s Policy Guidelines for Mobile Learning”

Samuel Suraphel – International Youth Foundation, “5 mLearning Lessons- An Implementer’s Perspective”



USAID
FROM THE AMERICAN PEOPLE



The 2012 Mobiles for Education Alliance International Symposium: Partnering for Scale and Impact

September 5-6, 2012
Grand Hyatt
Washington, DC

2012





Greetings

Welcome to the 2012 Mobiles for Education Alliance International Symposium. It is with great honor that for the second year in a row the Steering Committee brings together such a distinguished group of attendees from such diverse backgrounds and disciplines.

We are thrilled to convene researchers, project implementers, Ministry officials, donor agencies, the private sector and leading thinkers in the area of mobiles and education to continue to build upon the momentum of last year's Symposium.

We look forward to your participation in the 2012 Mobiles for Education Alliance International Symposium: *Partnering for Scale and Impact!*

Sincerely,

The mEducation Steering Committee

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mEducation Alliance Featured Working Group Session Tracks: Come plug in and participate in the Alliance's Working Groups!

Mobiles for Reading (mReading) Working Group

1.b mReading: *Partnerships for Data & Assessment*

September 5th, 2012

11:15 am – 12:30 pm

Room: Lafayette Park

2.b mReading: *Research and Evidence from the Field*

September 5th, 2012

1:30 pm – 2:30 pm

Room: Lafayette Park

3.a mReading: *Hands-on Workshop: biNu and Worldreader*

September 5th, 2012

3:00 pm – 4:00 pm

Room: Ballroom

4.b mReading: *e-Readers and Visual IRI*

September 6th, 2012

1:30 pm – 2:30 pm

Room: Lafayette Park

Mobiles for Youth Workforce Development (mYWD) Working Group in Partnership with The MasterCard Foundation

1.c mYWD: *Taking Stock of mYWD*

September 5th, 2012

11:15 am – 12:30 pm

Room: Farragut Square

2.c mYWD: *Connections and Content for Out of School Youth*

September 5th, 2012

1:30 pm – 2:30 pm

Room: Farragut Square

3.c mYWD: *Mobiles for Youth Skills Development*

September 5th, 2012

3:00 pm – 4:00 pm

Room: Farragut Square

4.c mYWD: *Shaping the Collaboration for mYWD*

September 6th, 2012

1:30 pm – 3:00 pm

Room: Farragut Square

The mEducation Alliance would like to thank the 2012 Symposium Sponsors:

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GENERAL INFORMATION

Location of the Symposium

The Mobiles for Education Alliance International Symposium is being held at the Grand Hyatt at Metro Center in Washington, DC. The address is:

Grand Hyatt Washington

1000 H Street NW
Washington, District of Columbia 20001

Getting to the Symposium

By Plane

If you are traveling to the Symposium by plane, you can reach the hotel the following ways depending on your arrival airport:

From Ronald Reagan National Airport:

- **DC Metro** - Take the Blue Line to Metro Center station. Follow 11th Street exit to the lobby of Grand Hyatt Washington hotel.
- **Super Shuttle** - No advance reservations required. Super Shuttles are located at Ground Transportation. A Super Shuttle representative is onsite during regular business hours. After hours, call 1-800-258-3826.
- **Taxi** - Taxis are available outside airport terminals. Grand Hyatt Washington is located approximately 15 minutes from the airport, traffic dependent.

From Dulles International Airport:

- **Super Shuttle** - Advance reservations not required. Super Shuttle stops are located on the Ground Transportation level roadway outside the Main Terminal at Dulles International Airport.
- **Taxi** - Taxis are available on the lower level of the Main Terminal. Wheelchair-accessible minibuses are available. Grand Hyatt Washington is located approximately 40 minutes from the airport, traffic dependent.

From Baltimore Washington International Airport:

- **Super Shuttle** - Super Shuttle is located at Ground Transportation. No reservations needed.
- **Taxi** - Find taxis outside Baggage Claim. Grand Hyatt Washington is 50 minutes from the airport, traffic dependent.

By Train

If you are arriving by train, you will arrive at Union Station. You can take the red line Union Station metro towards Shady Grove to the Metro Center (3 stops).

By Metro

The Grand Hyatt is located at Metro Center via the 11th St exit, accessible on red, blue and orange lines.

Registration

Independence Foyer, Grand Hyatt

Registration Hours

Wednesday, Sept 5th and Thursday, Sept 6th
8:30 a.m. – 1:00 p.m.

Name Badges

Your name badge serves as proof of your registration and is required as entry to all sessions and events for the day(s) you are registered. Please wear your name badge where it can be easily seen as you enter any activity. If you lose/misplace your name badge, please contact the Registration Desk.

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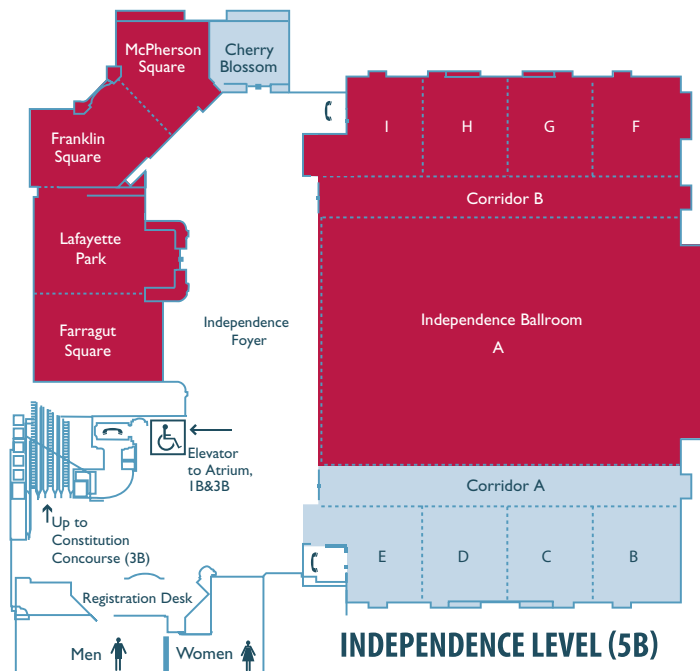
If you find an item that has been left behind, please bring it to the Registration Desk.

Please refer to the Registration Desk with any additional questions you may have about the Symposium.

On-site Assistance

For on-site assistance during the Symposium, please contact a member of the JBS team at 202-302-9240.

HOTEL MAP



THE 2012 mEDUCATION ALLIANCE INTERNATIONAL SYMPOSIUM: PARTNERING FOR SCALE AND IMPACT

AGENDA

WEDNESDAY, SEPTEMBER 5, 2012

8:30a.m. – 9:00a.m. Registration and Coffee

9:00a.m. – 10:00a.m. Opening Remarks and Keynote Addresses

10:00a.m. – 11:00a.m. Overview of Symposium and Networking Activity
(led by the mEducation Alliance Steering Committee)

11:00a.m. – 11:15a.m. Coffee Break, Participants welcome to populate “Parking Lot”

11:15a.m. – 12:30p.m. Breakout Sessions

I.a Partnerships: Advancing 21st Century Education (ACE) in Kenya – A Public-Private Partnership

Facilitator: Rob Schneider (USAID)

Panelists: Jodi Lis (FHI360), Julie N Clugage (Intel), James Bernard (Microsoft)

Ballroom

I.b mReading: Partnerships for Data & Assessment

Facilitator: Jordan Naidoo (UNICEF)

Presenters: Norbert Rennert (SIL) and Mike McKay (RTI): *Tangerine: Class – Partnerships in Open Source Development to Enhance Reading Instruction*; Yvette Tan (EDC) and Roger Rasnake (JBS International): *eEGRA: Using Strategic Partnerships to Drive Innovation in Literacy Assessment Software*

Lafayette Park

I.c Mobiles for Youth Workforce Development (mYWD): Taking Stock of mYWD

Facilitator: Linda Raftree

Presenters: Lauren Dawes (GSMA): *GSMA's 'Shaping the Future' and overview of the mYWD Working Group*; Theo Van Rensburg Lindzter (M-UBUNTU) and Thabang Mogale (Millenials as Mobile Educators): *Millenials as Mobile Education Providers: Linking service learning, workforce readiness and entrepreneurship*

Farragut Square

1.d In Focus: mEducation in Crisis and Conflict

Facilitator: Yolande Miller-Grandvaux (USAID)

Presenters: Ferran Lloveras (UNESCO) and Jacob Korenblum (SoukTel): *Partnering to Deliver Mobile Services that Strengthen Education Systems in Crisis and Conflict Settings*; Mike Dawson (PAIWASTOON): *EXE Mobile: New Open Source Editor for J2ME based mobile education and literacy in Afghanistan*

Franklin Square

1.e System Strengthening: The Power of Parents in mEducation

Facilitator: Kevin Cropper (Peace Corps)

Presenter: Toni Maraviglia (mPrep Kenya): *The Power of Parents in M-Education: Leveraging the Most Overlooked Educational Partners*

McPherson Square

12:30p.m. – 1:30p.m. Lunch Ballroom A

1:30p.m. – 2:30p.m. Breakout Sessions

2.a In Focus: Mobiles as Assistive Technologies

Facilitator: Axel Leblois (G3ICT)

Presenters: Betsy Beaumon and Kristina Pappas (Benetech): *From Symbian to Smart and Beyond: Making Reading Accessible to All*

Ballroom

2.b mReading: Research and Evidence from the Field

Facilitator: Anthony Bloome (USAID)

Presenters: Dr. James Stiles and Dr. Hilary Janks (University of Witwatersrand): *Mobiles, Apps and Literacy in schools*; Matthew Kam and Pooja Reddy (American Institutes for Research): *Designing Mobile Learning Initiatives to Enhance Educational Quality and Strengthen School Systems*

Lafayette Park

2.c mYWD: Connections and Content for Out of School Youth

Facilitator: Kimberley Kerr (The MasterCard Foundation)

Presenters: Scott Isbrandt (EDC): *PAJE-Nieta and the Stepping Stone mobile content authoring platform*
Jonathan McKay (Praekelt Foundation): *Ummeli: Mobiles for Youth & Workforce Development*

Farragut Square

2.d In Focus: Universal Design and Collaboration for mEducation

Facilitator: Christine Capota (IDB)

Presenters: Isabelle Duston (iLearn4Free): *Achieving Universal Design for Early Literacy with mLearning*; Marc Boxser and Phil Redhead (GEMS Education Solutions): *Tablets in and out of the classroom: unlocking student creativity and peer collaboration with the iBook Author app*

Franklin Square

2.e System Strengthening: Mobile Tools for Education Data

Facilitator: Chris Dede (Harvard University)

Presenters: Sony Belizaire and Rachel Hermes (Catholic Relief Services): *Plotting and Planning: National mapping and analysis of Catholic schools in Haiti using iPod touch, iFormbuilder and GPS Cradle*; Rachael Kadama and Deirdre Naughton (UNICEF): *EduTrac: Mobile technology informing planning for quality educational outcomes in Uganda*

McPherson Square

2:30p.m. – 3:00p.m. Coffee/Networking

3:00p.m – 4:00p.m. Breakout Sessions

3.a mReading Hands-on Workshop: biNu and Worldreader

Presenters: Mark Shoebridge (biNu) and Elizabeth Wood (Worldreader): *biNu & Worldreader: together bringing books to millions in the developing world using a device folks already own (hint: it's not an iPhone)*

Ballroom

3.b In Focus: Mobiles for Capacity Building

Facilitator: Ray Myers (U.S. Dept. of Education)

Presenters: Gonzalo Plaza (Puentes Educativos), Jenny Raymond (Pearson Foundation) and Matthew Wennersten (BridgelT India): *Empowering Teachers Through Mobile Technology*; Christelle Scharff (PACE University): *MobileSenegal: Three Years of Lessons of Capacity Building with Impact*

Lafayette Park

3.c mYWD: Mobiles for Youth Skills Development

Facilitator: Suzanne Phillion (U.S. Dept. of State)

Presenters: Michael Carrier (British Council): *Using mobile devices to strengthen educational systems, specifically in English for Basic Education and supporting workforce readiness*; Bhanu Potta (Nokia): *Nokia Life Education services – mLearning at scale of millions*; Shayan Mashatian and Saleh Aliyari (Appexiom – Petanque): *A demonstration of a mobile learning pilot and findings from its implementation*

Farragut Square

3.d In Focus: Bridging Public and Private with Partnership

Facilitator: Don Knezek (ISTE)

Presenters: Elliott Levine (HP): *Overcoming the hurdles to mobile technology initiatives*; Daniel Adriaio (e-xample): *The Future Generation of Countries will Rise from the new learning ecosystem – The Portuguese Example*

Franklin Square

3.e System Strengthening: Innovations in Content and System Tools

Facilitator: Carla Jimenez (World Bank)

Presenters: Amruta Desai and Suhas Gopinath (Globals, Inc.): *Mobiles for Education System Strengthening*; Stanley Edwards (Platypus Productions): *OGLE Educational Content Kiosks (South Africa)*

McPherson Square

4:00p.m – 5:00p.m Challenges to Partnership Formation: Expectations and Demands

THURSDAY, SEPTEMBER 6, 2012

9:00a.m – 9:30a.m. Opening Plenary: What have the last 10 years shown us?

Presenter: John Traxler (University of Wolverhampton)

9:30a.m. – 10:30a.m. Diversity that is Deeper than the Digital Divide

Mike Trainum (Life Access Technology Trust), Lou August (World Vision), Paul Kim (Stanford University), Pat Brogan (Fielding Graduate University), John Watters (SIL International), Pierre Biscaye (World Vision)

10:30a.m. – 11:00a.m. Coffee Break

11:00a.m. – 12:30p.m. Parking Lot Sessions

12:30p.m. – 1:30p.m. Lunch Ballroom A

1:30p.m.-2:30p.m. Breakout Sessions

4.a Hands-on Workshop: Stanford Mobile Inquiry-based Learning Environment (SMILE) for the Seeds of Empowerment

Presenters: Nari Kim, Donggil Song, and Paul Kim (Seeds of Empowerment): *Stanford Mobile Inquiry-based Learning Environment (SMILE) for the Seeds of Empowerment*; Tonya Brilon (Marvell)

Ballroom

4.b mReading: e-Readers and Visual IRI

Facilitator: Mike Trucano (World Bank)

Presenters: Zev Lowe (Worldreader): *Worldreader Kits*; Simon Richmond (EDC): *Visual IRI: Pico projectors enable a new instructional medium to teach literacy*

Lafayette Park

4.c mYWD: Shaping the Collaboration for mYWD

A Group Discussion Led By: Linda Raftree

(1:30 – 3:00)

Farragut Square

4.d In Focus: Partnering for Basic Education Quality Improvement

Facilitator: Lynn Nolan (ISTE)

Presenters: Kari Stubbs (BrainPOP), Luke W Filose (Intel), Mary Clisbee (NOVA), and Charles Callis (Waterford): *Improving Basic Educational Quality with Technology in Haiti: Partnership Approach at Ecole de Choix*

Franklin Square

4.e Mobiles for System Strengthening: Moving Forward with Mobile Projects and Policies

Presenters: Steve Vosloo (UNESCO): *The UNESCO Policy Guidelines on Mobile Learning*; Jean-Claude Balmes (French Agency for Development): *Public/private partnership to promote ICT in Sub-Saharan Africa*

McPherson Square

2:30p.m. – 3:45p.m. Demo/Posters Circulation (with coffee available)

- University of Arkansas (Glenda Revelle and Jennifer Bowman - *Connected Reading for Learning and Family Communication*)
- Yazmi (Dr. S. Rangarajan - *Satellite-Connected Tablets for Widespread Education in Developing Countries*)
- Learning Academy Worldwide (Lucy Haagen and Alan Jacobs - *Learning Academy Worldwide: 3 for 1 M-Education*)
- Orphans Overseas (Julie N Clugage [Intel], Charles Callis [Waterford], Luke Filose [Intel] - *Early Literacy Gains in Kenya - An Innovative Partnership Model*)
- Stanford Mobile and Social Research Group (Willem Bult and Ian Vo - *Musubi - Future Mobile Interaction and Learning with Secure Group-based Applications*)
- EcoMOBILE (Amy Kamarainen: *Blending Virtual and Augmented Realities for Ecosystems Understanding and Stewardship*)
- **(3:15pm) In Focus: in Farragut Room:** Hall Davidson (Discovery Education) – *Making Mobile Media Meaningful*

3:45p.m. – 5:00p.m. Closing Remarks: Next Steps

SYMPOSIUM PLANNING COMMITTEE MEMBERS

Lou August—World Vision

Anthony Bloome—United States Agency for International Development

Stephane Boyera—World Wide Web Foundation

Christine Capota—Inter-American Development Bank

Kevin Cropper—Peace Corps

Lauren Dawes—GSMA

Florence Gaudry-Perkins—Alcatel-Lucent

Carla Jimenez—World Bank

Don Knezek—International Society for Technology in Education

Kimberley Kerr—The MasterCard Foundation

Scott Kipp—JBS International

Rebekah Levi—JBS International

Ray Myers—U.S. Department of Education

Jordan Naidoo—UNICEF

Lynn Nolan—International Society for Technology in Education

Suzanne Phillion—U.S. Department of State

Marie Royce—Alcatel-Lucent

John Traxler—University of Wolverhampton-Learning Lab

Michael Trucano—World Bank

Steve Vosloo—UNESCO

SPEAKER BIOGRAPHIES

Daniel Adrião, Executive Board Director, E.xample

Currently Mr. Adrião is board director of E.xample, a consortium that represents the Portuguese industry of educational technologies. He was advisor for ICT to the Portuguese Ministry of Public Works, Transports and Communications from 2006 to 2010, and served as Portugal's representative in meetings and international forums of ICT in over 20 countries.

Saleh Aliyari, Researcher, Percepts and Concepts Laboratory, Indiana University Bloomington

Mr. Aliyari has been an educator and researcher for more than 15 years. His specialty is mathematics and sciences. He has taught many classes at Indiana University Bloomington (IUB) and has been running multiple distance learning courses for several years. Currently Mr. Aliyari does research at Percepts Concepts Labs at IUB, a part of the cognitive science program. His current research focuses on learning algebra using tablet technologies and exploring possible advantages of such uses of technology.

Lou August, Global Co-Leader, ICT for Development, World Vision International; President, Wilderness Technology Alliance

Mr. August leads World Vision's global ICT4D efforts to improve the effectiveness and efficiency of humanitarian programs in agriculture, economic development, and education. Over the past 26 years he has served as the president of a successful high technology firm, founder and president of an award-winning nonprofit organization that bridges the digital divide, and as director of technology partnerships at Save the Children. Mr. August earned a master's degree from Loyola University.

Sony Belizaire, Data Management and GIS Specialist, Catholic Relief Services, Haiti

Mr. Belizaire has worked as the data management and GIS specialist for Catholic Relief Services (CRS), Haiti, since 2011. Prior to working with CRS he taught computer science at Centre Universitaire de Management de Productivité and also served as a professor of computer science at Institut Supérieur Technique d'Haiti (ISTH) from 2006 to 2007.

Betsy Beaumon, Vice President and General Manager, Literacy Program, Benetech

Ms. Beaumon leads Benetech's literacy initiatives worldwide, including Bookshare, Route 66 Literacy, and the DIAGRAM Center for accessible images and graphics. She has cofounded two companies: Social Online Service, the first web-based referral service for social services, where she was an early supporter of web accessibility standards; and TradeBeam, Inc. Ms. Beaumon serves on the board of the DAISY Consortium, an international association of libraries for people with print disabilities.

James Bernard, Director, Partners in Learning, Microsoft

Mr. Bernard focuses on the role of technology as an accelerator of innovative teaching practice and students' attainment of 21st century skills around the world, and particularly in developing countries. He joined Microsoft Partners in Learning in 2008, with the goal of scaling programs for educators and school leaders through global multi-stakeholder partnerships with key nongovernmental organizations (NGOs), intergovernmental organizations (IGOs), and donors. Previously, Mr. Bernard served as vice president of marketing and communications at World Learning, a global NGO focused on intercultural exchange and education.

Pierre Biscaye, Resource Adaptation Officer, Education and Life Skills, World Vision International

Mr. Biscaye's work focuses on the empowerment of communities to develop an abundance of locally relevant resources to promote literacy, advocacy, and life skills. He has coordinated the implementation of localized resource development into World Vision International's education transition by developing best practice resource materials, piloting localization in East African communities, training local staff and volunteers in multiple areas, and engaging communities and education stakeholders to embrace their own potential for resource development.

Anthony Bloome, Senior Education Technology Specialist, USAID/E3

Mr. Bloome works as the senior education technology specialist in the global education offices in United States Agency for International Development (USAID), Washington, DC. In this capacity, he provides advice and coordinates the exchange of good practice experiences in the appropriate use of information and communications technology for education (ICT4E) to/among headquarters, mission staff, and other interested stakeholders. Recently, he has been spearheading the formation and development of the mEducation Alliance. Prior to joining USAID, Mr. Bloome worked as Peace Corps' global ICT specialist and as a distance education specialist at World Bank offices in Washington, DC, and Zimbabwe.

Marc Boxser, Vice President for Strategic Affairs, GEMS Education Solutions

Mr. Boxser leads GEMS's key institutional partnerships to develop new business opportunities, as well as overall corporate strategy. He joined GEMS Education from the World Economic Forum, where he headed IT partnerships, leading the Forum's community of the leading IT companies in addressing key disruptive industry trends. Previously, Mr. Boxser led business development and membership for the Forum for the Middle East and Africa, and he is a graduate of the Forum's Global Leadership Fellow Program.

Pat Brogan, Postdoctoral Fellow, Fielding Graduate University

Dr. Brogan has worked in the technology and learning field for several decades, holding management positions at IBM, Apple Computer, Raychem, Macromedia, and Borland. She holds a doctoral degree and master of science degree in human and organizational behavior from The Fielding Institute, where her doctoral research compared cognitive and affective factors in different modes of learning. She has worked with eLearning and accessibility standards and programs, and served as an adjunct faculty member in the Leavy School of Business at Santa Clara University.

Charles Callis, Vice President, Global Business Development, Waterford Institute

Mr. Callis is vice president of global business development and also leads international operations for the Waterford Institute. He has worked with educators, educational institutions, and governmental educational authorities to incorporate technology into pedagogy and school management in more than 25 countries over the last 20 years. Mr. Callis has served as managing director and vice president of marketing EMEA for Novell; vice president of global sales and marketing for Clearone Communications, Inc., Learnframe, Inc., and Altiris, Inc.; and as vice president of business development, strategy and marketing for Emida.

Christine Capota, Educational Technologist and Researcher, Inter-American Development Bank

Ms. Capota is an educational technology enthusiast who specializes in educational media and research projects. She holds a Master of Education from the Harvard Graduate School of Education, where she focused on technology, innovation, and education. Her interests lie in educational technology, international development, and psychology. Prior to her graduate studies, Ms. Capota worked as a digital media analyst at Sesame Workshop, where she analyzed the usage of new digital media initiatives such as podcasts, Web sites, and mobile video clips.

Michael Carrier, Director, English Language Development, British Council

Mr. Carrier is head of English language innovation for The British Council. He has been involved in eLearning technology (ELT) for over 30 years as a teacher, trainer, author, school director, and network director. He was formerly executive director of Eurocentres in Washington, DC, and until 2008 was chief operating officer of the International House World network of schools worldwide. His special field of interest is eLearning and the application of technology to language teaching.

Mary A. Clisbee, Principal at Ecole de Choix

Dr. Clisbee is the principal of Ecole de Choix (the School of Choice) located in Mirebalais, Haiti. She is on temporary leave from her position as associate dean of the Abraham S. Fischler School of Education of Nova Southeastern University, Miami, Florida, and is on special assignment in Haiti. She has an extensive background in K–12 and international education as a practitioner, researcher, and professor.

Julie Clugage, Global Operations and Communications Manager, Intel Corporation

Ms. Clugage manages operations, communications, and strategic alliances with the economic development community for Intel® Learning Series platforms. In her previous role at Intel, she was chief of staff for the vice president of Intel's corporate affairs group, supporting executive communications on Intel's education, environment, corporate social responsibility efforts, and driving education alliances with development agencies and NGOs. Prior to joining Intel in 2002, Ms. Clugage worked for the World Bank and the Inter-American Development Bank in Washington, DC, from 1996 to 2000.

Kevin Cropper, Technology for Development (T4D) Specialist at the Peace Corps

Mr. Cropper is the T4D specialist at Peace Corps, guiding the agency and volunteers in incorporating mobiles and other technology into programming and community support activities. Immediately prior to working at Peace Corps, he served as a Peace Corps volunteer on a remote island in Panama, where he observed just how ubiquitous mobile technology has become. Before that, he spent 10 years working on human systems integration efforts for air, sea, and space projects.

Hall Davidson, Senior Director of Global Learning Initiatives, Discovery Education

Mr. Davidson has spoken about technology and education around the world, including keynoting the Asian International Conference on Teaching and Learning with Technology and the 21st Century Digital Media Initiative in Romania. He spoke about tech integration in Mexico, about digital transformation for the Commonwealth Education Ministers in Kuala Lumpur, and on digital learning at UNESCO in Europe, in Eskisehir, Turkey, and in Dubai at GETX. Mr. Davidson now serves as senior director of global learning initiatives for Discovery Education.

Mike Dawson, Chief Executive Officer, PAIWASTOON

Mr. Dawson is the chief executive officer of PAIWASTOON, a 25-employee Afghan-International IT startup that has been working the last 6 years in Afghanistan on a variety of education technology projects. PAIWASTOON was the original implementer of One Laptop Per Child (OLPC) in Afghanistan, which developed an interactive version of the Afghan Ministry of Education literacy curriculum, and deployed remote networks for district government communication.

Chris Dede, Timothy E. Wirth Professor, Learning Technologies, Graduate School of Education, Harvard University

Dr. Dede is the Timothy E. Wirth Professor in Learning Technologies at Harvard's Graduate School of Education. His fields of scholarship include emerging technologies, policy, and leadership. In 2007, he was honored by Harvard University as an outstanding teacher, and in 2011 he was named a Fellow of the American Educational Research Association. Dr. Dede's latest coedited book, *Digital Teaching Platforms*, was published by Teachers College Press in 2012.

Amruta Desai, Executive Vice President, Strategy and Marketing, Globals, Inc.

Ms. Desai joined Globals in 2006 and drove the company's sales and marketing strategies across verticals. Under her leadership, Globals was able to build a strong partner network in North America, Europe, India, and the Middle East. Ms. Desai was also instrumental in building the company's product development strategies in education. She holds a Bachelors of Engineering in information science and an executive diploma from the Indian Institute of Management, Bangalore.

Isabelle Duston, Founder of iLearn4Free, Inc.

Ms. Duston is a strong advocate of mother tongue education; she started iLearn4Free, a nonprofit organization, in order to bridge the digital language divide and support cultural sustainability. By creating educational applications for mobile devices and computers in multiple languages, iLearn4Free will provide children across the globe with easily accessible educational opportunities through literacy apps such as Smart4Kids.

Stanley Edwards, Founder, Platypus Productions and Platypus Digital

Mr. Edwards has been in media production for over 26 years. He founded Platypus Productions and Platypus Digital, which focuses on developing digital content delivery platforms, display technologies, interactive experiences, and applications for mobile. Besides directing productions, Mr. Edwards also evaluates and consults on digital marketing trends, branded entertainment, new media platforms, and mobile technologies with a focus on integrating content with technology to create effective user experiences.

Luke Filose, NGO Marketing and Engagement Manager, Intel Corporation

Mr. Filose works for Intel's education technologies group and manages projects with education thought leaders. He also runs the Intel Education Service Corps, a technical assistance program that works with NGOs to deploy Intel® Learning Series solutions. Mr. Filose has extensive technology marketing experience and has also managed NGO projects in Africa. He has a bachelor's degree and master's degree in business administration from University of California, Berkeley.

Suhas Gopinath, Chairman and Chief Executive Officer, Globals, Inc.

Mr. Gopinath is a resident of Bangalore and comes from a middle class family where his father was a defense scientist. At the age of 14, he was recognized as the world's youngest certified professional Web developer through his project coolhindustan.com. Mr. Gopinath founded Globals, Inc., in 2000 in San Jose, California, as the laws in India did not allow minors to set up a company. Since then, Globals has drastically grown as a multinational IT consulting company focused on Web, e-Commerce, and mobile solutions.

Rachel Hermes, Education Coordinator, Catholic Relief Services, Haiti

Ms. Hermes is the education coordinator with CRS, Haiti, and currently works closely with the Episcopal Commission for Catholic Education and its 10 diocesan education office (which parallel Haiti's governmental departments) on capacity strengthening of education service provision. She has worked with CRS since 2008, and has a Master of International Affairs from Columbia University.

Scott Isbrandt, Directeur/Chief of Party, USAID PAJE-Nièta

Mr. Isbrandt is currently the chief of party for the USAID PAJE-Nieta project (Support to Youth Entrepreneurs Project) in Mali. He has experience developing ICT4ED solutions in international settings. In Niger, he led the development of basic education mobile applications and in Mali the development of Stepping Stone, an mLearning content creation tool for low-cost mobile phones.

Hilary Janks, Professor, Applied English Language Studies, University of the Witwatersrand

Dr. Janks teaches in the school of education at Wits University, Johannesburg, South Africa. She is the editor and an author of the Critical Language Awareness Series, the author of *Literacy and Power* (2010), and the author and editor of *Doing Critical Literacy* (in press). Her teaching and research are in the areas of language education in multilingual classrooms, academic literacy, critical literacy, and mobile literacy. Dr. Janks' work is committed to a search for equity and social justice in contexts of poverty.

Carla Jimenez Iglesias, ICT and Education Specialist, World Bank

Ms. Jimenez Iglesias is an ICT and education specialist at the World Bank, where she collaborates with the World Bank's flagship initiative, Systems Approach for Better Education Results (SABER-ICT), as it relates to information and communication technologies. She has over 7 years of experience in the field of education, with specialized skills in the design and evaluation of ICT and education initiatives. Ms. Jimenez has extensive experience in project design and management in regional, multilateral, and nongovernmental organizations.

Rachael Kadama, eduTrac Project Manager, UNICEF Uganda

Ms. Kadama has managed the eduTrac pilot for UNICEF Uganda over the past year, covering 1,436 schools in 14 districts. She became interested in technology and project management when she began her first job as an accountant for a Web development company. Ms. Kadama asked to be taken on as project manager trainee and over the last 13 years has managed teams and projects ranging from Web development to program evaluation.

Matthew Kam, Senior Innovations Scientist, American Institutes for Research

Mr. Kam spearheads Information and Communication Technologies in International Development (ICTD) research and implementation initiatives at the American Institutes for Research. He is a pioneer in the use of mobile phones for education in developing countries, and in introducing "human-computer interaction" thinking into ICTD discourses on intervention design. Previously, he was an assistant professor at Carnegie Mellon University. Mr. Kam's formal training spans computer science, economics, and education, all at the University of California, Berkeley.

Kim Kerr, Consultant, Youth Learning, The MasterCard Foundation

Ms. Kerr is supporting the design and development of The MasterCard Foundation's global secondary education scholarship program. She is an international development and education consultant with more than 20 years of experience working with national and international NGOs. Prior to consulting, Ms. Kerr was a technical team leader for Save the Children, Canada, where she provided technical support to education programming and supported Save the Children's Rewrite the Future campaign in conflict-affected and fragile states.

Nari Kim, Director of Learning Technology R&D, Seeds of Empowerment

Dr. Kim is a director of learning technology R&D at Seeds of Empowerment, and an assistant professor at the University of Wisconsin-Oshkosh. She received a doctoral degree in instructional systems technology at Indiana University Bloomington. Her research interest is designing inquiry-based learning environments for informal and formal learning with advanced Web and mobile technologies.

Paul Kim, Chief Technology Officer and Assistant Dean, School of Education, Stanford University

Dr. Kim is the chief technology officer and assistant dean at the Stanford University School of Education and has held this position since 2001. While at Stanford, in addition to teaching graduate level courses in the school of education, he has been leading projects involving the design of learning technologies, educational research, and community development. Dr. Kim received his doctorate in educational technology at the University of Southern California in 1999.

Donald G. Knezek, former Chief Executive Officer, International Society for Technology in Education (ISTE®)

Dr. Knezek, former chief executive officer of the International Society for Technology in Education (ISTE®), is recognized internationally for his leadership in transforming learning through innovative uses of technology. He has led innovation in the classroom, from the district and state department of education perspectives, and through large multistate and international projects. Dr. Knezek is committed to universal education and to professional learning in context for educators. He provides consulting services to ministries of education around world.

Jacob Korenblum, Chief Executive Officer, Souktel, Inc.

Mr. Korenblum is chief executive officer and cofounder of Souktel, Inc. He has been a past presenter at the 2011 mEducation Alliance conference, and a keynote panelist on mobile tech at the 2011 and 2010 "Making Cents" Global Youth Economic Opportunity conferences. Previously, he co-managed education projects for USAID contractors in the Middle East. Mr. Korenblum holds a Master of Education from Harvard University, where he also served as a Reynolds Foundation Fellow in Social Enterprise.

Pooja Reddy, Research Scientist, American Institutes for Research

Ms. Reddy conducts research on literacy development in multilingual, low-income communities of the developing world, and provides technical assistance for literacy program design and implementation. Previously, as a research associate at Carnegie Mellon University, she designed an English literacy curriculum for educational games on mobile phones for children in rural India. Ms. Reddy has taught second-language English in the slums of India and various international contexts.

Theophilus Van Rensberg Lindzter, Director and Cofounder, M-Ubuntu, Rome, Italy, and Cape Town, South Africa

Mr. Rensberg Lindzter is a teacher educator, media specialist, and musician who has worked in Sweden, the United States, and his native South Africa. For more than a decade, he has been a pioneer in using affordable digital technologies for literacy education and IT training for teachers and unemployed youth. Mr. Rensberg Lindzter will share his work as “father” of the Millennials as Mobile Educators within the larger M-Ubuntu initiative, meeting the challenges of recruiting, raising money for stipends, providing upfront training, and mentoring.

Jodi Lis, Technical Director, FHI360

Ms. Lis is a technical director at FHI360, information technology application department. She provides technical leadership, develops strategies, and implements educational technology interventions in Africa. Prior to FHI360, Ms. Lis lived in West Africa for 13 years. She managed a USAID-funded private sector project and owned a tourist shop selling local African products. Ms. Lis founded an organization to promote use of educational technology in Gambia, led capacity-building workshops throughout Africa, and taught at an international school.

Axel Leblois, Founder and Executive Director, G3ict

Mr. Leblois founded G3ict, the Global Initiative for Inclusive Technologies, an advocacy initiative of the United Nations Global Alliance for ICT and Development to promote the dispositions of the Convention on the Rights of Persons with Disabilities relative to e-accessibility and assistive technologies. Prior to G3ict, he served as chief executive officer of Computerworld Communications, chief executive officer of International Data Corporation (IDC), president of Bull HN Worldwide Information Systems (formerly Honeywell Information Systems), chief executive officer of ExecuTrain, and cofounder and president of W2i, the Wireless Internet Institute.

Elliott Levine, Education Strategist for the Americas, HP

Mr. Levine is HP's education strategist for the Americas. He and his team collaborate with educational institutions across the globe on comprehensive educational technology initiatives that foster 21st century skills. A former school administrator and adjunct professor of communication, Mr. Levine delivers speeches on technology and communication in education nationwide; is a past columnist for *Electronic School*, *School Administrator*, and *American School Boards Journal*; and has been interviewed for many leading educational publications over his career.

Ferran Lloveras, Program Specialist, Education in Emergencies, UNESCO

Mr. Lloveras has worked for the United Nations for the past 7 years and joined the UNESCO office in Ramallah 1 year ago as a specialist for education in emergencies. Previously, he worked in strategic planning at UNESCO headquarters in Paris, in matters related to education and UN reform, carrying out related field assignments in Uruguay, Namibia, Zimbabwe, and Haiti. He holds a master's degree in cooperation and development from the University of Barcelona.

Zev Lowe, Director of Research, Product and Business Development, Worldreader

Mr. Lowe joined Worldreader at the very beginning, jumping right into the first test pilot in Barcelona. He leads the research team, measuring outcomes and impact; drives Worldreader strategy as they grow and explore new ideas; and serves as lead problem-solver and way-smoother as they tackle a series of “firsts.” Mr. Lowe has computer science and anthropology degrees from Dartmouth College and a Master of Business Administration from ESADE Business School. He is currently a doctoral candidate at ESADE in social entrepreneurship and innovation.

Toni Maraviglia, Founder, MPrep

Ms. Maraviglia is the founder of MPrep, an edtech company that gives Kenyan schools access to quality educational materials through simple mobile technology. She has been an educator for over 7 years, starting as a Teach For America corps member/manager in New York City. Ms. Maraviglia holds a master's degree in teaching and in 2008 she started a successful educational program in rural Kenya. She firmly believes mobile devices can change the way we teach, learn, and think.

Shayan Mashatian, Founder and Chief Executive Officer, Appexiom, Inc.

Mr. Mashatian is a serial entrepreneur; president of the International Institute of Mobile Technologies (IIMT) and its sister company, Appexiom, Inc., a design studio for mobile technology development. He has worked with several global organizations to apply his expertise in using technology for social change. Currently he is focused on use of mobile for long-distance learning, as well as risks around user privacy and personal data protection in using mobile phones.

Jonathan McKay, Creative Director, Praekelt Foundation

A creator of engaging and empowering digital experiences, Mr. McKay believes that mobile phones are transforming Africa. Currently the creative director of Praekelt Foundation, a leading developer of mobile platforms for the "majority world," he has more than 10 years of experience crafting content and designing interactive experiences across a variety of media.

Mike McKay, Development Technologist, RTI International

Mr. McKay is the lead programmer for Tangerine and its versions, and the brains behind the selection of the technologies employed for its development.

Yolande Miller-Grandvaux, Senior Education Advisor, Office of Education, USAID

Dr. Miller-Grandvaux is a senior education advisor in the office of education at the USAID in Washington, DC. She holds a doctorate from Princeton University and a Master in International Educational Development from Boston University. Dr. Miller-Grandvaux has 25 years of field experience, with 10 consecutive years spent working in Africa as an education planner, girls education specialist, education monitoring and evaluation advisor, and chief of party for several USAID-funded education projects, as well as other development agencies and NGOs.

Thabang Mogale, Site Coordinator, Millennials as Mobile Educators, South Africa

Mr. Mogale first started working with the Millennials as Mobile Educators project as a volunteer. He then completed a year-long internship and became an expert in the use of mobile phones as learning devices, established a mobile lab at the school, coordinated teams of international volunteers, and facilitated collaboration between students at Ramosadi and a Detroit, Michigan middle school. Since then, Mr. Mogale has coordinated teams of volunteers from South Africa, the United States, Sweden, and Germany, thereby enabling the project to expand to six new schools.

Ray Myers, Senior Program Analyst, Office of Educational Technology, U.S. Department of Education

Mr. Myers has been a classroom teacher and university teacher/trainer in both the United States and abroad. He was a Peace Corps volunteer in India, and returned there twice (2006–2008) as an invited speaker/adviser. Mr. Myers taught at Japan's Hyogo University in the fall semester 1997, and from 1998–2008 he was the Education Department's liaison to Japan's Fulbright/FMF Teacher Program. Mr. Myers currently assists USAID in both the All Children Reading and mEducation Alliance initiatives.

Jordan Naidoo, Senior Advisor, Education (Scaling up and System Reconstruction), UNICEF

Dr. Naidoo is a senior education advisor at UNICEF in New York, responsible for providing leadership in systems reconstruction, and is leading on strategy and research on equity in education. He has worked on programs in Indonesia, Nepal, Ethiopia, Bangladesh, Bolivia, Haiti, South Africa, and the United States, among others. Dr. Naidoo received his Master of Education from the University of Natal, South Africa, and Doctor of Education from Harvard University.

Deirdre Naughton, Education Officer, UNICEF Uganda

Ms. Naughton is an education officer working on key areas of the KCL program of UNICEF Uganda, including the Zero Violence Campaign, WASH in Schools, support to ICT4D, and Education in Emergency Issues—in short many of the issues being measured through eduTrac. Her background and professional experience over the past 11 years spans education management, education program design, development/international relations, and technology for development.

Lynn Nolan, Senior Strategic Initiatives Officer, International Society for Technology in Education

Dr. Nolan's background encompasses extensive professional experience in the field of education locally, nationally, and globally. She presently serves as the senior strategic initiatives officer for the International Society for Technology in Education (ISTE). In this role, Dr. Nolan facilitates strategic planning for enhancing the organization's global presence, and identifies, explores, defines, and shares opportunities for partnering and collaborating. She also serves as a member of the mEducation Alliance steering committee and looks forward to chairing the Alliance's Partnership Working Group.

Kristina Pappas, International Program Manager, Benetech

Ms. Pappas has an extensive background in book publishing and international business. Under her direction, Bookshare International has grown to encompass members in over 40 different countries, books in 9 different languages, and partnerships with international organizations serving people with print disabilities. Through these partnerships, Bookshare International has implemented programs to increase international Bookshare membership by addressing the unique technology and infrastructure challenges that exist in many countries.

Suzanne Phillion, Senior Advisor for Innovation, Bureau of Education and Cultural Affairs, U.S. Department of State

Ms. Phillion (@SuzKP) is a foreign service officer with the U.S. Department of State. She currently serves as senior advisor for innovation in the Bureau of Education and Cultural Affairs. Previously, Ms. Phillion was new media advisor for the Western Hemisphere Affairs Bureau. Her foreign assignments include the U.S. Embassy in Bogota, Colombia, where she served from 2005 to 2008, including during the rescue of three U.S. citizens held captive by the FARC for more than 5 years. Ms. Phillion also served at the U.S. Mission to NATO in Brussels, Belgium, from 2002 to 2004. Ms. Phillion received her bachelor's degree from SUNY Binghamton in 1999, and her master's degree from Georgetown University's School of Foreign Service in 2001.

Gonzalo Plaza, Program Manager, Puentes Educativos

Mr. Plaza is the program manager of Puentes Educativos. Previously, he worked as a research fellow at the Inter-American Development Bank, as a research assistant for the Ministry of Education in Chile, and as a consultant for the Economic Commission for Latin America and the Caribbean, as well as for the World Bank. Mr. Plaza was also selected as a Global Shaper by the World Economic Forum. He holds a bachelor's degree in economics from the University of Chile.

Bhanu Potta, Global Product Leader, Learning and Knowledge Services, NOKIA

In the enterprise, academic, and public sectors, Mr. Potta has focused on creating technology-supported learning products and services; influencing strategy and policy for education, knowledge management, lifelong learning, and human performance; and ecosystems and business development to scale to millions of learners. Previously, he served as an associate director of knowledge management at Perot Systems. He also held various leadership roles at NIIT and Information Group, focusing on human performance, learning and development, knowledge management, education management, and enterprise competency development.

Roger Rasnake, Vice President, International Development; Evaluation Specialist, JBS International, Inc.

Dr. Rasnake, a vice president at JBS International, has nearly 30 years of experience in international development and research. He has worked in Latin America, Europe, and Eurasia, having directed numerous evaluations and assessments in these regions. Dr. Rasnake currently is the project director for Global Evaluation and Monitoring II (GEM II) BPA for USAID's Office of Education, a project that has carried out more than 50 task orders worldwide in the past 4 years.

Jenny Raymond, Pearson Foundation

Ms. Raymond oversees international programs for the Pearson Foundation, the independent nonprofit organization that works with others to make a difference by promoting literacy, learning, and great teaching. With a background in international development as well as educational technology, she has established numerous multisector partnerships and programs around innovative teaching and learning, including the use of mobile technology. Ms. Raymond holds a Master in Business Administration from Duke University and a bachelor's degree in psychology from the University of Pennsylvania.

Phil Redhead, Senior Advisor, Digital Learning, GEMS Education

Mr. Redhead began his teaching career in the United Kingdom, where he was also a New Opportunities Fund ICT Trainer, delivering professional development to teachers across the south of England. He later took up a post with Slough Education Action Zone, supporting innovative action research projects in schools across the borough. Mr. Redhead has worked in the Middle East for 8 years and is now senior advisor digital learning for GEMS, the world's largest provider of private K–12 education.

Norbert Rennert, Researcher, Canada Institute of Linguistics

Mr. Rennert is the developer of the SynPhony Prototype literacy program, a browser-based open-source program that matches the vocabulary of any language to the reading ability of any student. He has experience working in developing countries and previously worked for 10 years in Suriname, South America, as a linguist/translator, as well as helped produce literacy materials in Sranan Tongo.

Christelle Scharff, Associate Professor of Computer Science, Pace University

Dr. Scharff is an associate professor of computer science in New York City. Her research background is in formal software verification. Dr. Scharff has published articles in formal software verification, data mining, global software engineering, mobile computing, and education. She was awarded diverse grants from the National Science Foundation (NSF), Microsoft, IBM, and National Collegiate Inventors and Innovators Alliance (NCIIA). Her last two NCIIA grants concern the development of mobile applications for global development, with an emphasis on applications suitable for the African market.

Rob Schneider, Senior Alliance Advisor, Global Development Alliance, USAID

Mr. Schneider is senior alliance advisor at USAID, where he has worked since 2005 focusing on local economic development through public-private partnerships. He currently works in USAID's Global Development Alliance office, where he supports the creation of alliances in the technology sector. Prior to USAID, Mr. Schneider managed procurement and construction programs for a wireless telecommunications firm and also worked as a manufacturing engineer.

Simon Richmond, International Technology Advisor, Education Development Center

Dr. Richmond is an international technology advisor for the Education Development Center, where he designs and pilots new tech interventions. He has held both technical and management positions in a number of USAID-funded projects in Africa. Dr. Richmond has a doctoral degree in educational technology from Old Dominion University. He also grew up in rural Zimbabwe, attending the type of government-run primary school so often targeted in development work.

Mark Shoebridge, Director of Partnerships, biNu

Mr. Shoebridge is responsible for business development and partner relationships at biNu, working with digital media, government, and nongovernment organizations to help them cross the digital divide to reach millions of mobile users around the globe. Mr. Shoebridge is a family man, technologist, and marathon ocean surf ski paddler, and lives in Sydney, Australia.

Donggil Song, Educational Research Manager, Seeds of Empowerment

Mr. Song is an educational research manager at Seeds of Empowerment, as well as a doctoral student at Indiana University School of Education, where he is specializing in instructional systems technology. He has conducted research on measuring spatial intelligence and other cognitive abilities of blind children in a mobile learning environment and designed educational games as the sub-project of Programmable Open Mobile Internet for Social Cause.

James Stiles, Associate Professor, University of Witwatersrand

Dr. Stiles studies public interest organizations such as schools, higher education, arts, and NGOs. The results of the organizations are complex to assess and challenging to measure. He seeks to understand the relationship between the mission of such organizations and the tactics they employ to accomplish that mission. Working with qualitative and quantitative methods, Dr. Stiles explores how these organizations are led, how they use data, and how they regulate their progress towards meeting the mission.

Kari Stubbs, Vice President, 21st Century Learning, BrainPOP

Dr. Stubbs holds a doctorate in curriculum, with a technology emphasis, and has more than a decade of classroom experience. She has presented internationally in Shanghai, Dubai, and Beijing, as well as throughout the United States, on a wide range of education topics. Currently, she serves as vice president of 21st Century Learning at BrainPOP. Dr. Stubbs sits on the ISTE board, Horizon K12 Report board, and REAL Agenda Commission, among others.

Yvette Tan, International Technical Advisor, Education Development Center

Ms. Tan is an international technical advisor I at the Education Development Center (EDC). She has over 18 years of experience in research and analysis of educational issues in developed and developing countries. From 2008 to the present, her roles have included materials and technology/global development alliance specialist and reading specialist for a USAID-funded project in Mindanao, Philippines. She worked with EDC's senior technology advisor to pilot test eEGRA. Ms. Tan holds a Master of Education from the Harvard Graduate School of Education.

Mike Trainum, Cofounder and President, Life Access Technology Trust

For the past 23 years, Mr. Trainum has been instrumental in the development of the Shellbook System—model, method, and technology—used by communities in over 1,200 languages worldwide to localize and micropublish teaching and learning materials in terms of their own language and cultural perspective. In August, Mr. Trainum cofounded The Localization Alliance for Integral Human Development as a broad, intersectorial, public-private partnership dedicated to establishing localization as the inflection point for global development.

John Traxler, Professor of Mobile Learning, Director of Learning Lab, University of Wolverhampton

Dr. Traxler is a professor of mobile learning and director of the Learning Lab at the University of Wolverhampton. He is a founding director of the International Association for Mobile Learning. Dr. Traxler has co-written a guide to mobile learning in developing countries and is co-editor of the definitive *Mobile Learning: A Handbook for Educators and Trainers*. He has initiated projects in Palestine with UNRWA and with the South African Department of Basic Education on mobile learning and teacher training, and was a facilitator for the first massive open online course (MOOC) in 2011.

Michael Trucano, Senior ICT and Education Specialist, World Bank

Mr. Trucano is the World Bank's Senior ICT and Education Policy Specialist, serving as the World Bank's focal point on the topic within the education sector and leading the World Bank's related analytical work under its flagship Systems Approach for Better Education Results initiative as it relates to information and communication technologies (SABER-ICT). In addition, he provides advice and support to World Bank country-level education projects seeking to utilize ICTs in various ways in multiple countries around the world.

Steve Vosloo, Programme Specialist, UNESCO

Mr.Vosloo is a program specialist in mobile learning at UNESCO, where he manages the UNESCO Nokia Partnership. Previously, he was a fellow for 21st Century Learning at the Shuttleworth Foundation. He founded the m4lit (mobiles for literacy) project, which demonstrated the enormous potential of mobile publishing to support teen reading and writing in South Africa and Kenya. In 2007, Mr.Vosloo was a research fellow at Stanford University, where he researched youth and digital media.

Katherine Walters, Medical Officer, Special Pathogens Branch, Centers for Disease Control and Prevention/Health KAP Consulting

Dr.Walters is board certified in preventive medicine, has a tropical medicine degree, and has served in the Epidemic Intelligence Service. She has over 50 peer-reviewed publications and is currently an anthrax expert. Dr. Walter's health education experience includes directing infectious disease epidemiology for the Texas State health department, serving as chief public health officer for the prison system, and advising on key concepts/curriculum for HIV/AIDS, avian influenza, and swine influenza Shellbooks. She also developed STDWizard.org.

John Watters, President, Board of SIL International

Dr.Watters focuses on serving minority language communities worldwide, building their capacity for sustainable language development by means of research, translation, training, and materials development. He has worked with a minority language community along the Nigeria-Cameroon border for 40 years, and has experience with other such communities in Cameroon, Chad, and Nigeria. In Dr.Watters' 20 years in international leadership, he has interacted with similar language communities in most regions of the world. He holds a doctorate in linguistics.

Matt Wennersten, Head of Scalability in Education, EZ Vidya

Mr.Wennersten heads the scalability in education group at EZ Vidya. With a master's degree in engineering and education, he has served as enterprise architect, country manager, and consulting practice lead for multiple Web 2.0 development companies. He has also been a classroom teacher, department head, teacher trainer, and curriculum developer for public school systems. In addition to developing education technology products for EZ Vidya, Mr. Wennersten and his team perform action research on how technology is effectively implemented in schools.

Elizabeth Wood, Director of Digital Publishing, Worldreader

Ms.Wood leads the digital publishing and mobile phone book app team at Worldreader. She is responsible for partnering with international and local publishers and authors to bring a wide variety of compelling and relevant content to Worldreader e-reader programs and the Worldreader book app for mobile phones. Ms.Wood received her undergraduate degree from the College of Journalism and Communications at the University of Florida and subsequently her Master of Business Administration from INSEAD.

DEMONSTRATION AND POSTER AREA

Connected Reading for Learning and Family Communication

This poster and demo presents research on the Connected Reading Project, a series of technology explorations designed to improve long-distance, intergenerational family communication with young children, while also helping to facilitate children's literacy learning. Prototypes that structure family communication around the shared activity of reading a book have been created on both mobile devices and the Web. Mobile prototypes of the family reading platform created by Nokia and Sesame Workshop will be demonstrated.

mLearning Using a Satellite-Connected Tablet

The world's first satellite-integrated tablet has been designed to ubiquitously deliver cost-effective and high-quality education. The tablet comes preloaded with educational apps and can receive data in both asynchronous and synchronous modes. Yazmi's in-orbit satellites cover nearly two-thirds of the globe and allow the tablet to support multiple curricula across different geographies. It is an optimal solution to overcome the challenges in enabling access to education for all.

Musubi—Future Mobile Interaction and Learning With Secure Group-Based Applications

Mobile devices will change education and learning methods to become more interactive and collaborative. Musubi is a secure group application platform for smartphones that allows users to quickly and easily engage in a variety of multimedia-integrated collaborative applications. These applications center on groups and allow the group members to share messages and multimedia with each other. By engaging in multimedia-integrated applications, students can learn by sharing content and solving problems collaboratively.

Early Literacy Gains in Kenya—An Innovative Partnership Model

Orphans Overseas, a US-based NGO, has partnered with Intel Corporation and the not-for-profit Waterford Institute to conduct a successful pilot in the marginalized slum areas of Thika, Kenya (outside Nairobi), to boost learning outcomes for 2–5 year-old preschool children who lag behind in all spheres of development. The project has deployed rugged, affordable Intel Classmate PCs that are purpose-built for education. Included with the PCs is Waterford's educational software, which contains early-learner programs in English literacy, math, and science to provide students with customized reading instruction, memory retention exercises, and mathematical concepts.

Learning Academy Worldwide: 3 for 1 M-Education

3 for 1 will present a sustainable model for mLearning based on a partnership connecting Durban University of Technology (DUT, in South Africa), the M-Ubuntu Project (Sweden, South Africa), Sprint Re:cycle (United States), and South African students in resource-poor rural and township schools. Deploying recycled smartphones as multimedia platforms for otherwise unavailable educational content, M-Ubuntu/DUT teams of university students (under faculty direction) serve as literacy/numeracy coaches for struggling students in crowded, under-performing rural and township high schools. Inspired by the Cisco Net@ training programs, M-Ubuntu/DUT teams train youth with an interest in technology to serve as mobile tech support apprentices at participating schools, handling the device charging, repair, and content transfer that can be burdensome for teachers and university volunteers.

EcoMOBILE: Blending Virtual and Augmented Realities for Ecosystems Understanding and Stewardship

EcoMOBILE (Ecosystems Mobile Outdoor Blended Immersive Learning Environment) is studying how ecosystems instruction can be more engaging and effective by combining immersive virtual environments and real ecosystems infused with virtual resources. Its goals are to explore the unique affordances of augmented reality, as well as the capabilities of data collection probeware to support setting-enhanced learning in environmental science education. The context-aware capabilities of mobile technologies can flexibly deliver relevant tools and just-in-time understanding to people in developing countries. Mobile technologies that enable learning about local environmental issues can increase comprehension and motivate action on local environmental challenges in the United States and abroad.

In-Focus Session: Hall Davidson - Making Mobile Media Meaningful

Tablets, mobile phones, and iPads can create and share media (video and audio) in the extended learning anywhere/anytime world. This focused session will look at how students, teachers, or schools can send images/videos/audio to common, free "channels" to support classrooms, projects, or entire schools. Learn about media applications for discarded "dead" phones, which can serve as great tools. Data will be shared from digital adoptions in the United States and its positive effect on student achievement and student engagement with these digital curriculum materials.

NOTES



Mobiles for Education Alliance

