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Technology for Education and Training

RTI leverages technology to improve the delivery of basic education. RTI’s technology applications also enhance traditional face-to-face training approaches in ways that can scale equitably.

To improve opportunities to learn as well as instructional quality in the education sector, RTI designs, implements, and evaluates strategies that incorporate the best use of multimedia, rapid computing, connectivity, and other capabilities of technology—especially on mobile devices. We partner with governments to develop focused, practical interventions and deploy them with stakeholders across multiple sectors.

Technology for Education

As public education systems in low-income countries expand enrollment, they see the need to improve education efficiency and efficacy to ensure that all children acquire skills that are critical to future learning and success. RTI works with governments and local partners to evaluate how appropriate and scalable technologies—such as digital teaching aids, coaching resources, and education data collection methods—can enhance teaching and learning. Simultaneously, RTI supports change management for technology integration and sustainability. Core areas of expertise include:

- Information systems for management, administration, and governance of education
- Hardware and software for data collection, student assessment, and monitoring and evaluation
- Multimedia and communication tools to enhance teacher training, coaching, and teaching

- Technologies to improve learning outcomes and foster inclusive education
- Sector assessments, research, and analytical reviews of current trends in technology for education.

Recent Project Highlights

- RTI developed Tangerine™, an open-source data collection software tool optimized for mobile devices in low-resource environments. Tangerine has been used for nearly 2 million surveys and child assessments, such as the early grade reading and mathematics assessments (EGRA/EGMA) and the Measuring Early Learning and Quality Outcomes (MELQO) assessments, in more than 60 countries, in 100 languages, and by over 50 organizations. Visit <http://www.tangerinecentral.org> for more details.
- Tangerine:Coach, a version of Tangerine optimized to support large-scale coaching and sector performance monitoring efforts, has been shown to be cost-effective during a pilot program in Kenya. Deployment has since been scaled to all public-school instructional coaches in Kenya: over 1,100 across the country. The model has also been adapted to Liberia, Sierra Leone, Uganda, and Cambodia.
- Following a pilot program in Bangladesh that demonstrated the positive aspects of using simple phones and SMS technology for teacher professional development at a distance, RTI has adapted this approach to provide support,

Tools

RTI has developed mobile data collection and communication systems applicable for a wide range of technologies and contexts.

Tangerine™ Open-source assessment and survey platform. Adaptable to other languages and assessment tools.	Tangerine:Teach Offline continuous assessment platform for teachers to track student progress and inform instructional decisions.	Tangerine:Coach Combines data from assessments, surveys, and classroom observations to inform coaching feedback.
Gooseberry System to capture data via interactive text messages/SMS.	Strawberry Uses Gooseberry data to streamline the process of paying people for attending training sessions.	Tangerine: EF Touch Measures executive function in preschool-aged children through multiple tasks to test inhibitory control, working memory, and cognitive flexibility.
School Gateway Mobile-centric monitoring and reporting platform.	CurrantMobile™ Mobile skills assessment tool that uses a games-based approach to measure employability skills.	Papaya Phonological awareness application that assists teachers and students in learning correct letter/syllable sounds in any language.

motivation, program updates, and content to teachers and district officials in projects in Uganda and Malawi.

- In Samoa and Egypt, RTI contributed to enhanced classroom teaching by using carefully selected hardware packages and relevant, curated content. The projects enhanced the capacity of national officials to design curriculum-integrated digital learning resources, and to develop and conduct training for school administrators and teachers that promoted integration of technology to sustain learning outcomes.
- RTI implemented the evaluation of the Global Learning XPRIZE field trial in Tanzania, a rigorous experimental research program covering nearly 2,500 disadvantaged children, designed to determine whether software could support children's learning of basic literacy and numeracy outside of school.

Technology for Training

RTI's focused, practical interventions improve the quality of professional development, across sectors such as education, health, and governance. Our technology-supported alternative training opportunities can reach and connect remote and

often underserved populations. For traditional face-to-face approaches, we enhance their effectiveness by applying multimedia in innovative ways. Core areas of expertise include:

- Promoting access to education opportunities and learning resources through innovations and partnerships in online and distance learning
- Enhancing face-to-face training and follow-up using games, simulations, and other multimedia solutions
- Facilitating knowledge management through integrated reporting dashboards, data mining, and visualization
- Supporting social mobilization and community engagement.

Recent Project Highlights

- In Jordan, RTI is studying the efficacy of Tangerine:Teach to support teacher behavior change in formative assessment and differentiated instruction. This includes helping teachers to give constructive feedback to students and to adopt diverse teaching strategies.
- In Ethiopia, RTI assisted teacher training colleges nationwide to adopt a package of multimedia teaching aids. The package improves pre-service teacher preparation in reading instruction for seven mother tongues.
- Also in Ethiopia, RTI supported implementation of regional pilot programs to test how technology could support early-reading teacher training and instruction targeting children with special needs. This effort highlighted the prevalence of visual and hearing impairments in general education classrooms, and investigated whether technologies could support teachers in adopting more inclusive practices.
- Across our projects (e.g., in Nepal, Uganda, Kenya, Indonesia, and Ethiopia), RTI also supports the recording and use of model videos to support teachers as they adopt new instructional methods and materials.

Explore <http://SharEd.rti.org> for articles and reports on a variety of topics, including SMS-mediated training, MOOCs, assistive technologies, and more.

More Information

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