Chapter 2
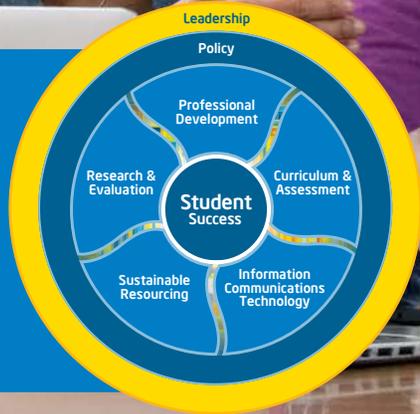## Leadership Is Essential for Transformation

Leadership is a key to successful ICT programs. Key Implementation Factor #9 states that school-level leaders must be trained in facilitating second-order change. There must be a focus on the changes that will drive the continuous and sustained improvements expected from 1:1 programs, including increasing student learning and finding efficiency that leads to revenue-positive results. Inquiry and professional learning for leaders must be integral to the process.

Michael Fullan, a researcher and professor emeritus of the Ontario Institute for Studies in Education at the University of Toronto, is a recognized authority on educational reform, provides context around sustained improvement and the change process, and provides resources to facilitate development of leaders' strategies to lead authentic transformations in schools. Read more here: 8 Forces for Leaders of Change.

Transformational/ Second-Order Change

Magnitude of change for education is an important consideration. A 1:1 program creates second-order changes in culture, learning and teaching, and national focus. The following table describes the qualities for first- and second-order change.

FIRST-ORDER CHANGE	SECOND-ORDER CHANGE
An extension of the past	A break with the past
Consistent with prevailing organizational norms	Inconsistent with prevailing organizational norms
Congruent with personal values	Incongruent with personal values
Easily learned using existing knowledge	Requires new knowledge and skills

School Leadership That Works, McREL, 2005

New Zealand's Ministry of Education hosts a web site on first- and second-order change strategies. Click here for more details.

For first and second order change there is a direct correlation between the magnitude of change and the value of the investment. For example, first-order change drives nominal differences in results, such as students becoming more engaged in learning. While this is important, second-order change drives real differences in student outcomes, such as improved test scores and measurable return on investments.

What does centralized leadership look like?

Centralized education systems rely on ministries of education to garner strategies and resources for development and deployment of a national technology and professional learning system for school directors. Developing leaders' new skills in one region/ territory can provide a foundation for expanding a train-the-trainer model across the nation (see upcoming section on Professional Learning).

What does decentralized leadership look like?

In decentralized education systems, school directors work with local training organizations to develop practices that drive "change" models for embracing 1:1 learning and teaching. The Organization for Economic Cooperation and Development (OECD) provides a distributed model for school leadership in its Toolkit.

While there are many options for leadership training, two examples of effective school leader professional learning programs are:

- The Balanced Leadership Profile—an online feedback tool based on the leadership practices identified in *School Leadership That Works*: http://blp.changetheodds.org/LearnMore

- E-Lead, Leadership for Student Success: www.e-lead.org/principles/principal.asp

Resource: Raj Dhingra is a 20-year veteran of the technology industry with an extensive track record of building strong, sustainable and profitable industry leadership positions in new and emerging categories. His TEDxBend talk, "Can Technology Change Education? Yes!" provides stories and facts as resources for creating the vision for a 1:1 program, personalizing learning and enabling a globally competitive economy.

Strategic Visioning

To launch an ICT program, national leaders and stakeholders must craft a shared strategic education technology vision and define actionable steps to bring that vision to reality. The strategic vision defines WHERE the nation or state or school wants to be in the future, and communicates purpose, research, and return on investment.

The vision lays the groundwork—defining the current education technology status in relationship to future goals. For example, a country's education system may currently have a 10:1 student-to-computer ratio and define its "vision" as creating a 1:1 student-to-computer ratio in five or 10 years. Realistic action steps lie between the current status and the future expectation. Please see Intel's Education Technology Adoption Model.

CASE STUDY:

Transforming Peru's Main Port to the World Into a Digital City

RESULTS

Goal is to create a "digital city"

Program includes **PCs** and **wireless infrastructure**

More than **30,000 educators trained** on technology integration

The port city of Callao, Peru, has long been the key gateway between Peru and the rest of the world. Recognizing that future prosperity depends on technology, the regional government of Callao has embarked on an initiative to create a digital city. This effort draws its vision from the 1:1 eLearning program being built into the education system.

- The 1:1 eLearning environment is the foundation on which the digital vision is being built for the future of Callao.
- Computers are being deployed, including nearly 6,000 laptops for teachers and PCs for students.
- The EduCallao computing portal has been created as a central online hub for educational resources and activities.
- Wireless infrastructure is being built to interconnect schools and other municipal facilities.
- School administration is being modernized through the use of ICT.
- Teacher professional learning is underway, helping nearly 30,000 Peruvian educators get the most out of technology.

Download this Case Study

Project RED Global Implementation Tools for Leadership

To aid leaders in successful 1:1 implementations, Project RED developed tools, rooted in groundbreaking research, to guide success. Following are instruments that will guide global technology planning and deploying. They address readiness/needs assessment, budgeting-costs and planning, and timeline/task development.

READINESS RUBRIC >>

It is informative and foundational, and possibly eye-opening, to discover your current readiness to embark on a 1:1 implementation. Implementing a successful 1:1 program is a complex undertaking, involving numerous important components. Use the Project RED Readiness Rubric to discover local or national gaps and areas of readiness. The information gleaned from the rubric can help guide strategic visioning and the development of a formal implementation project plan.

IMPLEMENTATION COSTS COMPARISON TOOL >>

The costs of technology implementations vary widely. Reported costs for 1:1 implementations in the United States range from $250 per student per year to more than $1,000 per student per year.

1:1 COST SAVINGS CALCULATOR >>

There are many factors to consider when analyzing costs for a national education technology program. Project RED's research provides 14 specific areas where costs can be reduced to repurpose funds for other investments such as education technologies.

A planning team can use this tool to prioritize areas to reduce costs. The Calculator offers flexibility to enter a different number of students for each category to calculate results with maximum accuracy (this version shows U.S. dollars).

IMPLEMENTATION TIMELINE/TASK TOOL >>

Realistic, doable timelines will provide a crucial path for implementing a national education technology program. Elements of the timeline are also detailed in the Project RED Model Design and project plan. This complex work is not linear. However, accounting for each aspect, detail, and timeframe within dependencies will make it possible to deliver on goals.

RED DESIGN MODEL PROJECT PLAN >>

The RED Design Model Project Plan guides global leaders along the path of a thoughtful, detailed implementation. Using an online project management tool, SmartSheet*, the RED Design Model Project Plan is a powerful Gantt chart offering the ability to lead and manage a national and global protocol. Countries can customize the Model Project Plan to reflect the unique needs, culture, and organizational structures of government and education ecosystems.

Download the RED Design Model Project Plan for a real-time roadmap/plan template. It is essential to have a designated project manager/lead. Ensuring plan fidelity—timelines, budget, benchmarks, dependencies, roles, and responsibilities management—is complex, time-consuming work.

Project Management

A strategy is a solution for moving from current practice to a future desired outcome. Strategy relays WHAT is to be accomplished. A project plan is required to define HOW that strategy will be achieved. The project plan nails down a process for achieving desired results. It incorporates all significant tasks, dependencies, timelines, benchmarks, and quality assurances to achieve expected outcomes. The project plan requires consistent management and oversight. Departments and individuals responsible for tasks must regularly communicate progress to move the project forward. Key categories for inclusion in an ICT global project plan are:

- Leadership and management of the plan
- Budget – human and financial resources planning
- Infrastructure
- Curriculum and instruction
- Professional learning
- Evaluation and assessment
- Communications

Recommendations for Turning Research Into Practice: Leadership

Governments, ministries of education, policymakers, and school leaders have the opportunity to study and use the Project RED research. They can seek confirmation of the findings, and apply the information to create new kinds of technology-powered schools that will define and contribute to a thriving global economy and compete on a global scale for years to come.

In centralized and decentralized education systems, effective school directorship is essential to create successful education programs and enable greater student achievement. Professional learning, university-level preparation and on-the-job and/or intern experiences are required to develop high-quality leaders. Additionally, today's school directors must be skilled in facilitating second-order change and helping each educator scaffold to new practices and expectations.

The communications systems among education leaders, centralized and decentralized, should be of consistent messaging around purpose, supporting research, and practices for the ICT program. Though all leaders may not agree on approach, all should understand the imperative for progress in the education system and have a voice in feedback and suggestions for effective application within their sites/organizations.

Mandates for high-quality school leader development will be helpful. University-level professional programs can incorporate theory into practice through internships, job coaching, and accreditation programs. A high level of instructional technology theory, research, and practice should be included in these preparatory programs. Understanding and utilization of technologies for operations and administrations is also very important for school leaders.

Additional areas requiring school leaders' skill development are:

- Community and organizational communications.
- Understanding and framing research underpinnings for ICT programs.
- Identifying and engaging project managers for large-scale programs with complex tasks, dependencies, budgets, and timelines.
- Facilitating teachers' professional growth for emerging practices and integration of instruction and technology.
- Observation skills in recognizing effective/ineffective ICT practices.
- Building communities of professional practice for creating human capacities for change and program success.

Leadership Recommendations for Centralized Education Systems

- Create and amplify a national education technology plan.
- Establish national professional learning standards (above focus areas) around ICT leadership.
- Incorporate change agency development within the above standards.
- Mandate higher education institutions to incorporate curriculum and online opportunities for school leaders to access programs anytime, anywhere.
- Identify leading organizations to establish communities of practice for school leaders to grow expertise through collaboration.
- Provide resources and incentives for school directors to participate in.
- Institute regional, national annual/bi-annual conferences for school leaders to hone their skills by working with ICT experts.
- Create a system of troubleshooting, solution generation, communications around school ICT matters.
- Adopt a national portal for leaders to collaborate, problem-solve, seek, and upload resources.

Leadership Recommendations for Decentralized Education Systems

- Create and amplify a national education technology plan.
- Hold regional meetings and question/answer sessions to disseminate and teach the plan.
- Incentivize higher education to incorporate change and ICT leadership curricula in education administration degree programs.
- Set expectations and provide incentives for local/regional/state/provincial systems to establish standards for school leaders around ICT implementation/sustainability.
- Establish regional organizations' expectation to provide consistent professional growth opportunities for school leaders in ICT implementation and change agency.
- Establish and expect regional organizations to engage their local sites to participate in leaders' collaborations and professional communities of practice around ICT.
- Research and recommend online portal and management systems for regional leaders to collaborate, problem-solve, seek, and upload resources; seek national government support and/or create a consortium of regional/local sites.