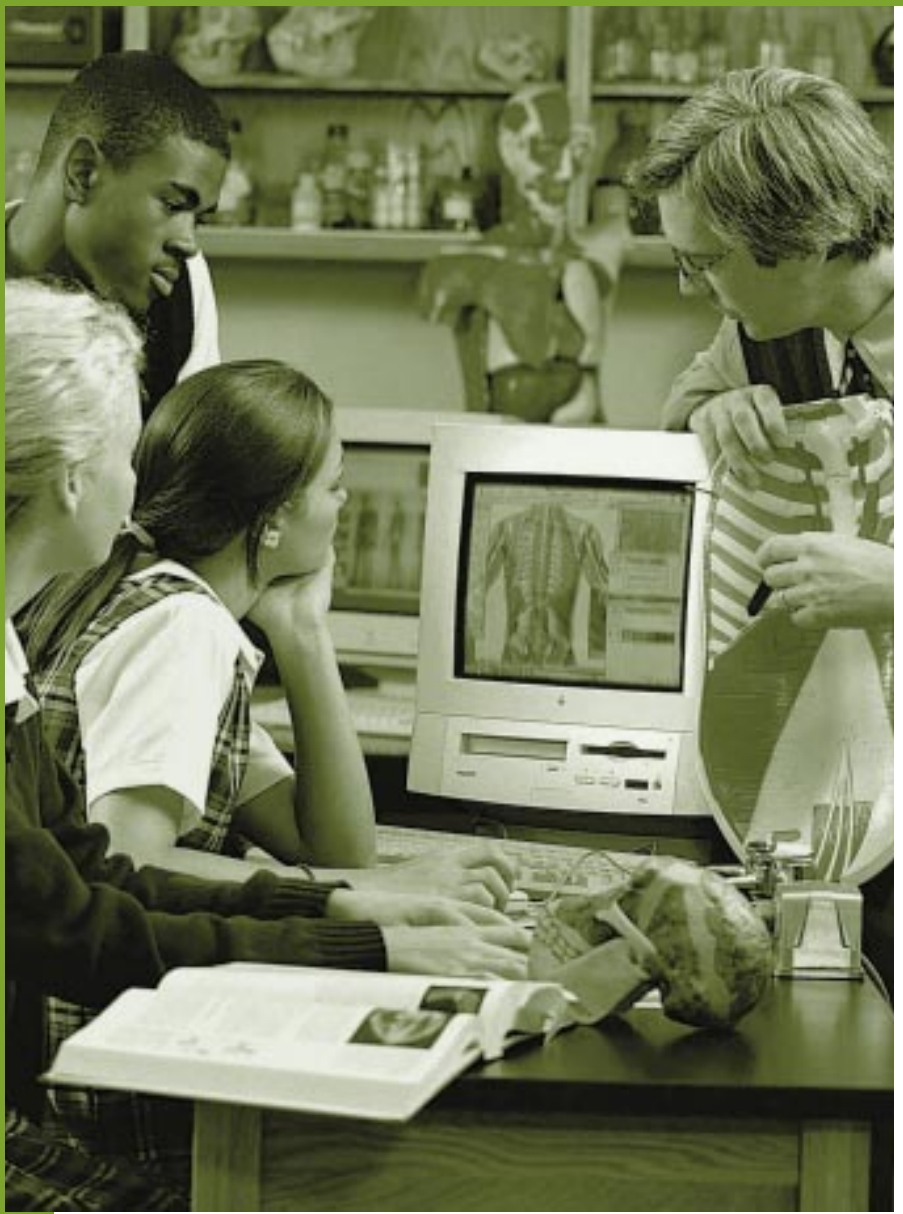
7 Technology in American Schools: Seven Dimensions for Gauging Progress

— At a Glance —

Milken Exchange on education technology

Learning in a Digital Age

American Education at a Crossroads



Technology is a part of children's everyday lives. They don't remember a time without space travel, pagers, cell phones and the Internet. While most educators agree that technology is important to student learning, many are finding that successfully incorporating technology into the education system and using it in ways that increase student learning and achievement are far more complex tasks than expected.

Educators must chart a course toward the effective use of technology for learning and show evidence of progress along that path. The framework in this document does just that. It is a set of indicators for policymakers to consider when assessing whether or not schools have established the "essential conditions" necessary to improve student learning through technology.

At a Glance:
The Seven Dimensions of Progress

Framework for Progress Indicators

A number of respected experts in the field of education and learning technology have contributed to the Milken Exchange's design of these seven interdependent dimensions. The framework is intended to be used by the educational community, technology coordinators, policymakers and researchers as:

- a vision that will define expectations for the public investments in K-12 learning technologies;
- a self-assessment tool that assists schools, districts and states to gauge their progress toward that vision;
- a planning tool for strategizing how to incorporate technology and telecommunications into education in ways that improve student learning;
- an accountability system for tracking the return on public investments in education technology; and
- a research agenda that will help guide studies of how and under what conditions technology is an effective tool for learning.

1 Learners

Are learners using the technology in ways that deepen their understanding of the content in the academics standards and, at the same time, advance their knowledge of the world around them?

FLUENCY:
Are learners fluent using technologies and communication networks for whatever endeavors they choose?

STRENGTHENING THE BASICS:
Does this use of technology make it possible for the learner to acquire the basic skills with more depth?

DEVELOPING HIGHER-LEVEL PROFICIENCIES:
Does this use of technology make it increasingly possible for the learner to engage in learning practices that lead to new ways of thinking, understanding, constructing knowledge and communicating results?

INCREASING RELEVANCY:
Are learners using contemporary technologies, communication networks and associated learning contexts to engage in relevant, real-life applications of academic concepts? Does their work parallel the way in which professionals in the workforce use technology?

MOTIVATION TO LEARN:
Is quality access to technology and telecommunications increasing the intrinsic motivation of learners to learn?

RECOGNITION OF TRADEOFFS:
Are learners cognizant of the tradeoffs inherent in the application of technology as they make life choices in a global, technological society?

2 Learning Environments

Is the learning environment designed to achieve high academic performance by students through the alignment of standards, research-proven learning practices and contemporary technologies?

LEARNING CONTEXT:
Are educators establishing a learning context and physical environment that require and enable students and student teams' use of contemporary tools to research issues, solve problems and communicate results?

LEARNING CONTENT:
Is the use of instructional and learning technologies carefully aligned with standards, curriculum, instruction and assessment that reflect the knowledge-based, global society of today?

SCHOOL CULTURE:
Is the school culture one that encourages, enables and rewards educators individually and collectively to improve the learning and teaching processes through the effective use of technology and communication networks?

TECHNOLOGY ACCESS:
Do teachers and learners have sufficient access to productivity tools, online services, media-based instructional materials and primary sources of data in settings that enrich and extend their learning goals?

INFORMATION AND COMMUNICATION:
Is the learning environment a place where the effective use of information and communication technologies is modeled for and by students?

3 Professional Competency

Is the educator fluent with technology and does he/she effectively use technology to the learning advantage of his/her students?

CORE TECHNOLOGY FLUENCY:
Are the faculty and staff proficient, knowledgeable and current with contemporary technology?

CURRICULUM, LEARNING AND ASSESSMENT:
Have the teachers' fluency with technology translated into unique and relevant learning opportunities for students?

PROFESSIONAL PRACTICE AND COLLEGIALITY:
Are educators using technology and communication networks to advance their own professional practice and collegial interactions? Are educators knowledgeable and current with technology in their field of study?

CLASSROOM AND INSTRUCTIONAL MANAGEMENT:
Are teachers creating learning contexts and physical environments that require students to take on more independent roles in their own learning through their use of technology and telecommunications?

ADMINISTRATIVE COMPETENCIES:
Are administrators modeling the effective use of technology; developing and supporting systemic change processes to maximize support for learning; and facilitating appropriate professional development processes?

The Right Questions to Ask... The Right Indicators to Measure...

4 System Capacity

Is the education system reengineering itself to systematically meet the needs of learners in this knowledge-based, global society?

VISION:
Has the system engaged key stakeholders, plus the broader community, in defining and clearly stating a compelling vision and expectations for technology in schools? Is that vision embraced by the entire system?

ALIGNMENT AND PLANNING:
Has the system developed a comprehensive, long-term plan? Is there alignment between the plan for technology in schools and existent policies and practices (e.g., rules and regulations, fiscal priorities, operating practices, allocation of resources, investment in human capital and accountability)?

ENSURING CAPACITY:
Is the system ensuring that educators, communities and components of the system itself have the capacity to translate that vision into compelling, meaningful learning activities for children, youth and adults?

LEADERSHIP AND SYSTEMS THINKING:
Is there a team of leaders who embrace the vision and are in positions to facilitate the system changes necessary to reach that vision? Is the vision for improved learning through technology a design factor across the entire education system?

5 Community Connections

Is the school community relationship one of trust and respect, and is this translating into mutually beneficial, sustainable partnerships in the area of learning technology?

COMMITMENT:
Are key community stakeholders committed and involved in planning, implementing and evaluating the system's use of learning technologies?

COLLABORATION:
Has the system identified the full range of mutually beneficial partnerships, exchanges and collaborations? Are any of these opportunities currently being implemented?

CLARITY:
Do all technology partnerships, exchanges and collaborations include clear articulation of expectations, implementation plans, time lines and accountability systems?

COMMUNICATION:
Are there mechanisms for ongoing communication among partners and the broader community for the purposes of celebrating successes, building awareness, monitoring progress and encouraging wider participation?

6 Technology Capacity

Are there adequate technologies, networks, electronic resources and support to meet the education system's learning goals?

INSTALLED BASE:
Do schools have an installed base of modern technology equipment (computers, calculators, digital cameras, projection devices, scanners, printers, etc.) to support the learning, communication and administrative goals of the education system?

CONNECTIVITY:
Is the connectivity adequate to support current and rapidly growing demands created by the learning, communication and administrative requirements of the education system?

TECHNICAL SUPPORT:
Is there adequate technical support to provide timely, expert troubleshooting, technical assistance, ongoing maintenance, operation and upgrades?

CLIENT ORIENTATION:
Are client needs being met? Is there a high level of customer satisfaction?

FACILITIES:
Are the facilities within the system "technology-ready"?

7 Accountability

Is there agreement on what success with technology looks like? Are there measures in place to track progress and report results?

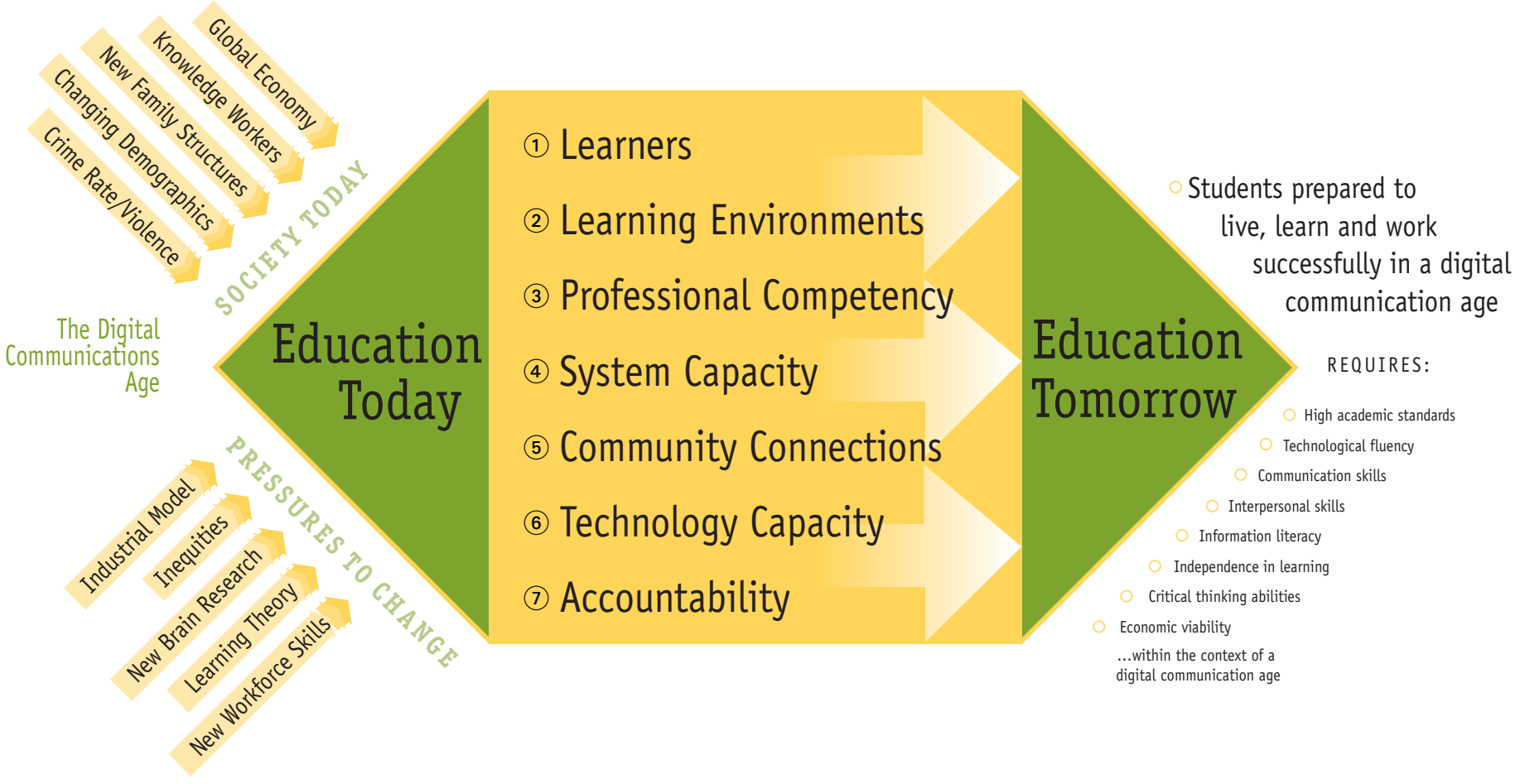
DELIVERABLES AND BENCHMARKS:
Have clear goals been set, accompanied by an integrated strategy, to support implementation and change, measurable process and outcome objectives and a reasonable schedule of expected progress?

DATA COLLECTION/ INTERIM PROGRESS:
Is there a well-designed data collection plan established which includes appropriate indicators of key implementation and outcome objectives? Are multiple measures analyzed to regularly assess progress toward goals?

DATA-DRIVEN DECISION MAKING:
Are district, school and classroom educators regularly using results to inform all levels of their planning and decision-making processes? Are assessment results being used to allocate resources, refine implementation strategies, identify promising practices, and support continuous improvement?

COMMUNICATION PLAN:
Is a communication plan in place to keep all stakeholders regularly informed of technology learning goals and progress toward those goals; to engage all stakeholders in the process of continuous improvement?

Education Technology 7 Dimensions of Progress



The Milken Exchange on Education Technology

With annual national investments in education technology at over $5 billion comes the question, "Does it work?"

The answer is that technology *can* be a powerful, effective learning tool – but only in the right hands and under the right conditions. Simply bringing computers and the Internet into classrooms will not improve student academic performance. What's required is thoughtful, intelligent and selective application of how and where technology can add value; rigor in imposing the conditions that are essential to its effective use; and an understanding of the powerful role it is already playing in society and in shaping the lives of our young people. The challenge is that of recognizing technology's potential—then making the hard choices and policy decisions that ensure it is responsibly and effectively used.

Increasing student performance and academic achievement has always been the central focus of the Milken Exchange. It is our experience and belief at the Milken Exchange that technology—properly managed and applied—has the potential to restore rigor to children's learning, rebuild public confidence in American education and help ensure that the equality of opportunity in which we pride ourselves as a nation has meaning. Over the last year the Milken Exchange on Education Technology has emerged as a national nerve center with new knowledge and insights into how technology can be most effectively used to improve student performance.

The outgrowth is a new publication, *Technology in American Schools: Seven Dimensions for Gauging Progress,* a framework for ensuring that schools make wise choices that will help guarantee a solid return on federal, state and local technology investments. Educators and policy-makers across the country are using this framework as a vision, a planning process, a self-assessment tool, an accountability measure and a guide to a research agenda. The Milken Exchange anticipates that it will stimulate discussion, debate and action as American education tackles this new challenge, one fraught with risk, but also with opportunity.

We also invite you to join us at our Web site (www.milkenexchange.org) to access a growing knowledge base, reflect and react to the Exchange's insights into the issues, and debate the latest in learning technology research. The better informed we are as a nation, the greater the opportunity for responsible and effective uses for learning technology.

Milken EXCHANGE on education technology

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Interested in the Seven Dimensions?

For more information...

The Milken Exchange has published two documents that provide insights into the Seven Dimensions framework.

TECHNOLOGY IN AMERICAN SCHOOLS: SEVEN DIMENSIONS FOR GAUGING PROGRESS	
QUANTITY	**DOCUMENT**
☐	A Policymaker's Guide *(An overview of the Seven Dimensions)*
☐	An Educator's Guide *(The overview plus a continuum for charting progress in each dimension)*
☐	At a Glance *(Additional copies of this brochure)*

If you are ordering more than 10 copies, please contact the Milken Exchange at 310/998-2825 or milkenexchange@mff.org

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