



**eLearning System for
Arizona Teachers and Students Inc.**

ROADMAP

**For
ARIZONA K-12 TRANSFORMATION**

**With
21st Century
eLEARNING BASED
SYSTEMS DESIGN**

October 15, 2007

Background

Vision is 10 years: K12 eLearning is not a one time expenditure or effort but must be a major commitment with adequate resources to ensure success over the long haul.

Mapping a plan: We were mapping a human factors system design – a significantly large step beyond a plan.

Why: Arizona students deserve it, and our economy and our global competitiveness depend on it.

Return in investment – Many dollars return per dollar invested. Our children are our future. This time, let's act like we mean it!

Journey has begun – Much of the technical, pedagogical and human infrastructure is in place, accessible or is being developed. 2006 SB1512 for 1,500 student middle school eLearning math pilot is a prime example.

To Maintain Momentum Arizona Must: Exercise leadership at the highest parenting, educational, executive and legislative levels.

Getting There Will Take: Ten year commitment and resources to expand intellectual infrastructure by building out continuous teacher professional development, digital curricula, data warehouse – decision support system, broadband infrastructure and a computer on every desk, in every classroom, in every school in Arizona.

Investments Now = Growth Later: The potential return is astounding. Arizona K-12 going into the top five states in national academic testing with funding requirements of only 3% of total legacy K-12 cost.

Arizona's Place in the eLearning Map – AZ's Bioscience project provides a model of how community, stewardship and political support can move the State into eLearning leadership position.

Paving the Way – initially eSATS system design focuses on the intellectual infrastructure and piloting eLearning Centered Schools and programs.

Achieving the Goal –in year three the massive innovation wave begins to be deployed to all schools, grade levels and subjects.

Vision Arizona 2018

Arizona K-12 learning is flourishing within an eLearning centric school system designed and implemented to enable teacher-student interaction. After passage of the initial eSATS legislation in 2006 to 2008 student academic performance soared along with high school graduation rates. Arizona's unique focus on digital curriculum and teacher professional development assured success for eLearning. Arizona now leads the United States in efficiency, effectiveness, accessibility, equity and accountability of K-12 learning. eLearning has generated large cost savings in construction avoidance, books and delivering 13 K-12 academic years of learning in 11 to 12 calendar years. The savings has returned K-12 funding to historical legacy education levels while affording a net twenty percent increase in teacher salaries and adequate funding for pre-kindergarten programs. The benefits of graduates' occupational success and Arizona economic development far exceed the ten year eLearning investment of three percent of K-12 education cost.

Mapping Arizona's K-12 eLearning Systems Design

eLearning is the application of digital instructional programs and computer-internet systems to support learning. eLearning almost always forms a hybrid with legacy education integrating the best of both into an effective, efficient and accessible form of learning.

Why Arizona Should Invest in K-12 eLearning

1. Societal demand for K-12 academic performance and graduation rate has change radically from fifty years ago.
2. Legacy education reforms and restructuring has made incremental progress in the past twenty years. Without large cost increases in the range of 25% over inflation and growth the future is challenging.
3. eLearning is a scalable technology based solution that has a proven track record of increasing academic performance by an average of one letter to two grade levels across all types and ages of students.
4. eLearning savvy students will be prepared to transition seamlessly into both higher education and 21st Century workforce training.
5. K-12 eLearning will build on the strengths of Arizona's large cluster of eLearning enterprises (\$3 billion revenues) that are global leaders in workforce, higher education, military-simulation, and individual as well as K-12 markets.

Return on investment

If Arizona made a fresh investment of an average of 3% of current K-12 education costs into eLearning for only ten years it would generate...

1. A transformation of Arizona from a lower performing K-12 state into a top 5 state.
2. With eLearning generated cost savings from construction avoidance, reduced books, and elimination one to two years from the current 13 to graduation, teachers could be paid 20% more and have an additional \$2,300 for professional development and mentoring.
3. High value eLearning enterprise products and services will flow into global markets. Companies and quality jobs will flow into Arizona.
4. Arizona K-12 eLearning dominance at all educational levels will induce federal research funding to flow in eLearning research institutes at our universities.

Journey has begun

eSATS has created a systems design for transforming all of Arizona K-12 education into a top five academic performance state. eLearning centered schools will be transformed to mastery learning with the support of the newly created Digital Curriculum Institute and Arizona Learning Technology Institutes' focus on K-12 education.

This bold ten year initiative is being supported by major communities: education, business, governance, philanthropy, and eLearning enterprise. Their steward actions are united and coordinated from within a P20 type collaboration created ten years ago. The full system design was introduced in the Arizona legislature in 2005. Initial funding for a middle school math pilot for 1500 students, a 10 year eLearning Task Force and policy supporting eLearning for all students was secured in the 2006 legislature. Policy for transforming to eLearning centered schools was legislated in 2007.

To Maintain Momentum – Vision of eLearning For All Students, Arizona must:

Continue to garner support from leadership in education, governance, business and eLearning enterprises.

Increase the general public's knowledge and understanding of current and emerging K-12 eLearning and the power it has to significantly improve academic performance for every student.

Make a one time ten year investment equivalent to 3% of current K-12 costs until cost savings kick in and pay for eLearning as well as significant increase in teacher salaries.

Use part of this investment to develop a statewide cadre of eLearning savvy teachers that transform their practice so they have greatly increased contact time with students.

Develop Arizona as the world center for research, development, implementation and support of digital curriculum for each of Arizona's 1 million soon to be 1.4 million students.

Getting There Will Take:

A ten year long commitment and patience in the early years. The intellectual infrastructure must first be built along with pilot schools. It will be five years before there are enough eLearning Centered Schools to create a significant rise in Arizona statistics.

Champions. Leadership at all levels is needed. From the Governor, Superintendent of Education and Legislative Leaders to school level Educators must commit to this awesome transformation and provide collaborative leadership across the state.

Strategic Focus. Tactical focus of one time buying of computers is behind us. The strategic focus on implementing a long term, total system solution is the only way to succeed.

Strong public-private collaboration. Arizona has a strong history of working together including the most recent being our Biosciences initiative. Arizona Technology, Innovation and Technology, and P20 councils and the new eLearning Task Force are aggressively working on public-private policy issues.

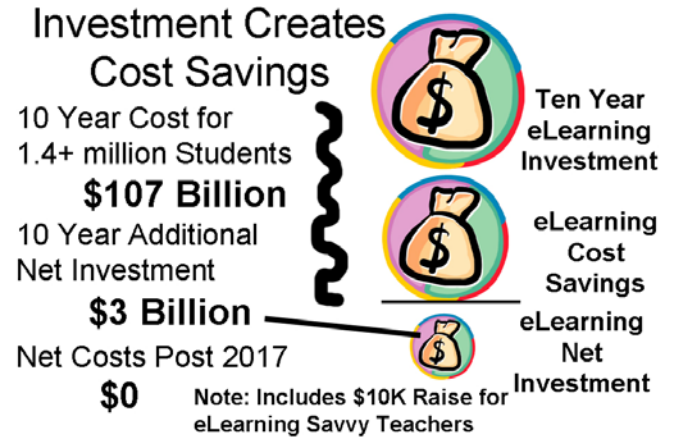
Acceptance by educators. The eSATS systems design places an awesome responsibility of change on Arizona Department of Education, colleges of education, school districts, schools and classrooms. This transformation will be effective only with the creative and enthusiast commitment at all levels.

Active state level support. Systems must be in place for success. These include an extended and integrated ADE-School District decision support system and instructional delivery system. Colleges of education must transform to produce eLearning savvy teacher graduates. The Arizona university system must create the Digital Curriculum Institute to assess and provide access to the best available digital curriculum using a portal and

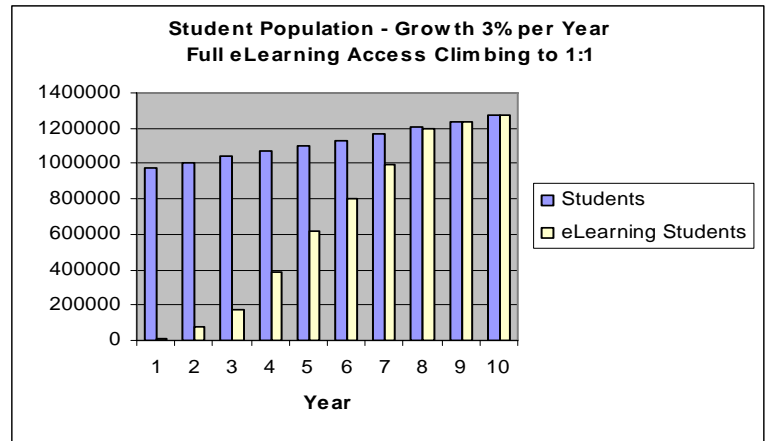
instructional technologist extension service to the classroom. The Auditor General must create the rules for funding K-12 education based on mastery by the individual student of one academic year. Communication Infrastructure Advisory Committee must effectively complete the statewide Broadband Initiative.

Transformation => eLearning Self Sustaining Academic Gains

Hard to see the 3% increase in cost that drops to cost neutral in ten years.

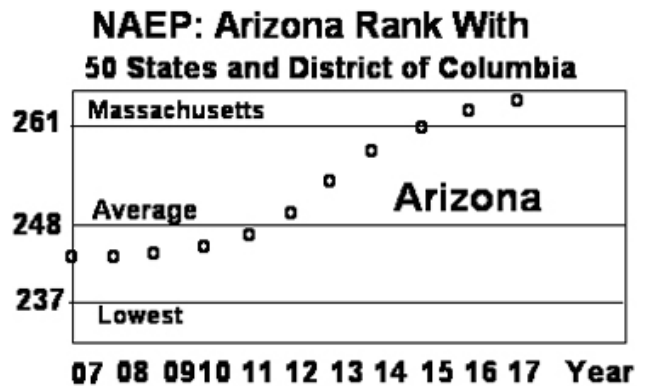


As Arizona student population soars the number of eLearning supported students soars even faster.



Based on the studies, eLearning will double the number of Arizona students in Proficient or Advance Classifications within the NAEP national exam for 4th and 8th math and reading.

From our current 41st NAEP ranking Arizona will be in the first quartile by the Arizona Centennial year and beat our way to number 1 within 10 years.



Arizona's Place in the K-12 eLearning Map

Encouraging:

Wilson Elementary District, the most disadvantaged in Maricopa county, adopted 1:1 eLearning 12 years ago and has steadily progressed from dead last to academic leadership in the 13 feeder districts to Phoenix Union High School district. Empire High School, Brichta Elementary and several charter schools have adopted 1:1 eLearning.

Arizona has one of the largest clusters of eLearning enterprises, including Pearson Digital Learning the largest K-12 digital curriculum company in the world.

Challenges:

Arizona has a history of frugal spending on K-12 education, State budgets are negative and eSATS eLearning design requires new investment.

eLearning is a new, transformational concept in an industry that is not designed or rewarded for risk taking change.

Making a Mark on the K-12 eLearning Map

Arizona's eLearning transformation must seize not only local interest but become nationally acclaimed. This would be instrumental in obtaining federal government, corporate, and foundation support to ease the burden of pioneering it alone.

While serving Arizona the Digital Curriculum Institute and Arizona Learning Technology Institute would secure clients world wide.

By starting as a fourth quartile academic performing state our stunning rise (like Wilson District) in ten years to lead the first quartile will make Arizona the super star for solving the K-12 education dilemma, and putting America back on the path to global competitiveness.

Time Line for Success

Paving the Way

Because ten years is a short time for total transformation of any industry and especially K-12 education, there will be significant overlap in building the infrastructure and transforming school by school to a 21st century eLearning design.

2006 – SB1512 Established ten year policy for the Arizona eLearning Task Force to support transformation and a middle school math pilot program; and data system boost at ADE with \$5.5 million funding.

2007 – HB2472 Established policy for eLearning centered school transformation with funding for one small K-8 school for \$1 million.
2008 – 2010 Found the Digital Curriculum Institute and expand the operations of Arizona Learning Technology Institute. Complete broadband connectivity to all rural districts, laptop-projector-smart board-essential suite of software to all teachers, instructional systems with formative assessment and Auditor General rule making for mastery learning funding. Fund data-decision support system for personal learning plan model. Start refresh of the aging 120,000 computers provide by the School Facilities Board. Transform 100 eLearning centered schools. Bring infrastructure to full operation. Bring the student to computer ratio to 5:1

Achieving the Goal

2011 – 2012 Accelerate transformation to serve 300 schools. Bring the student to computer ratio to 3:1
2012 – Celebrate Arizona Centennial with Arizona will on its way to breaking into the top quartile of academically performing states
2013 to 2016 – Continuously improve the eSATS System Design as Arizona research delivers better eLearning solutions. Bring the number of schools in the system to 1600.
2017 – Celebrate the last Arizona school becoming a 21st Century eLearning Centered School and Arizona sliding into U.S. academic leadership.

The current activities and eSATS Design Report: <http://azelearning.org>.

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