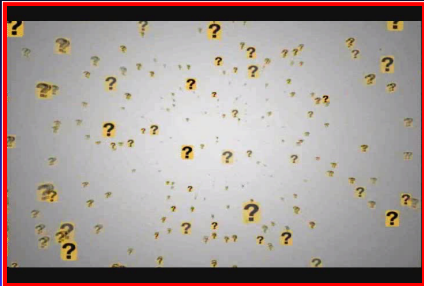


**Step by Step... How and Why
you need to become a 21st
Century School**

Bob Hughes


Florida Educational Technology Conference
January 15, 2010



Did You Know?

2

**What does a 21st Century
school look like?**



Cedar River Academy
Enumclaw, Washington

<http://www.cedarriveracademy.com/>

Trends:

The Ford Model T Plant
Highland Park, Michigan

Microsoft Redmond

4

OPRAH – July 13-14, 2006
High Tech High – San Diego, CA

5

High Tech High

Nine schools in San Diego County:

- one elementary school,
- three middle schools, and
- five high schools.

No dropouts

100 percent accepted in college

All of these schools serve a diverse,
lottery-selected student population;

Video Tour: George Lucas Educational Foundation
<http://www.edutopia.org/>

School Partnership



Shorecrest High School
Shoreline School District (Seattle)

Microsoft Project Partnership
BloodStar Space Demo

Statewide Competition on Projects




EAST initiative – Arkansas
Annual State Wide competition
Hot Spring, Arkansas

Theme Magnet



Aviation High School
Highline School District - Seattle
500 students, (29 % High Poverty)
40 % apply from outside the district

Active Learning Community



Newsome Park Elementary School
Newport News, Virginia
K-5 Science Magnet

What does a 21st Century school look like?

"It is not enough to do your best; you must know what to do, and THEN do your best."

[W. Edwards Deming]

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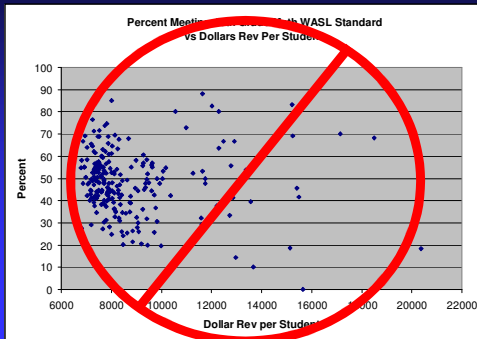
A "Research" Question...

Predicting Success in school?

What would you guess is the primary factor
influencing student learning?

Is it money?

Washington State Return On Investment - ROI



What is the primary factor influencing student learning?

- Smaller school size
- Smaller class size
- Improved data for decision making
- High student motivation
- Closer teacher /student relationship
- Increased student time-on-task
- Closer teacher / parents relationship
- Fewer kids living in poverty
- Improved teacher quality
- Allow more charter schools

<http://www.polleverywhere.com/my/polls>

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What is the primary factor influencing student learning?

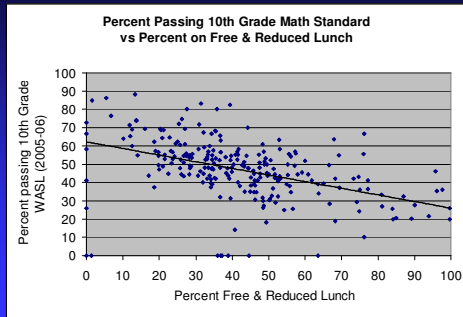
TEXT to 99503

- 131839 Smaller school size
- 131840 Smaller class size
- 131841 Improved data for decision making
- 131842 High student motivation
- 131843 Closer teacher /student relationship
- 131844 Increased student time-on-task
- 131845 Closer teacher / parents relationship
- 131846 Fewer kids living in poverty
- 131847 Improved teacher quality
- 131848 Allow more charter schools

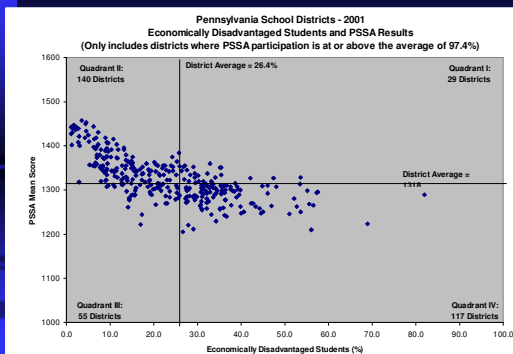
<http://www.polleverywhere.com/my/polls>

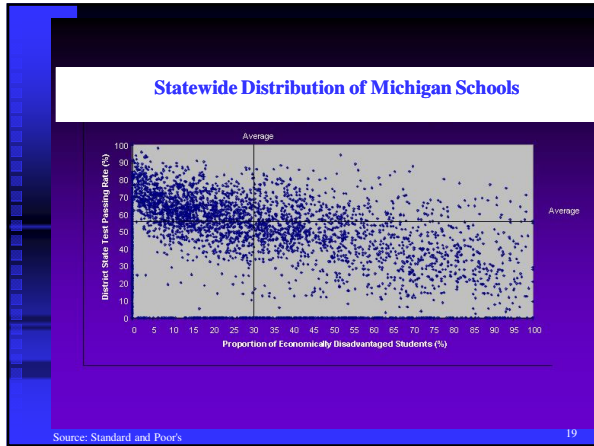
16

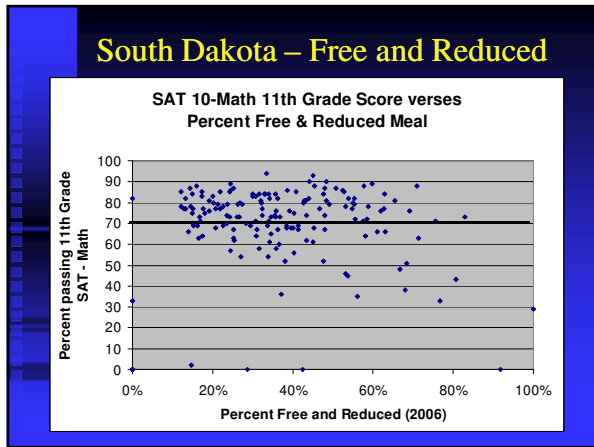
Washington State – Free and Reduced

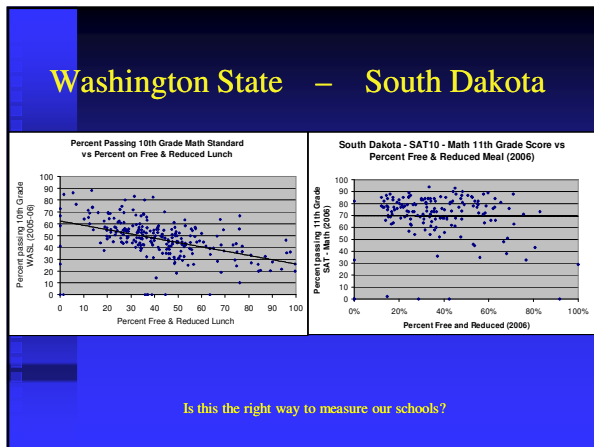


Pennsylvania – Free and Reduced



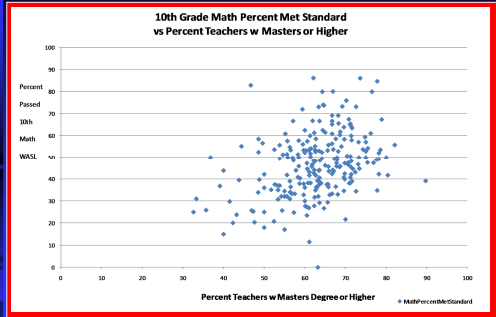




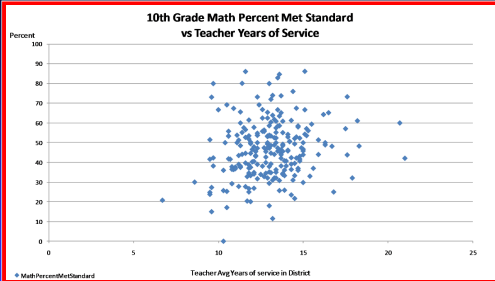


What is the impact of teaching quality on student learning?

22



23



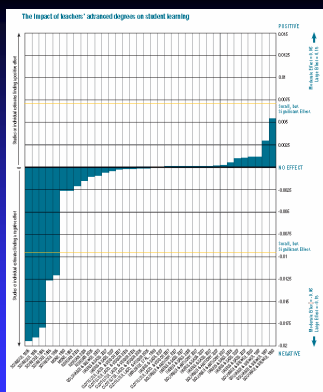
24

Out of 102 statistical tests that were examined, 64.7% (n = 66) of the estimates indicated that teachers advanced degrees did not have any significant impact on student achievement.

On the other hand, 25.5% (n = 26) indicated a negative effect, and 9.8% (n = 10) suggested a positive effect of teachers' advanced degree on student achievement.

Source: National Council on Teacher Quality – October 2009
Human Capital in Seattle Public Schools:
<http://www.nctq.org/p/publications/reports.jsp>

25



Best Predictor?



- #1 Time On Task Ref: *Outliers* by Malcolm Gladwell
- #2 Highly Motivated Student
- #3 Closer teacher / Parent relationship
- #4 Closer teacher / student relationship
- #5 Education Level of the Parent
- #6 Family Income (Free and Reduced Meal) *



* The only data we have

27

A Little History

What Should Schools Look Like?

<ul style="list-style-type: none"> • Horace Mann  (1796-1859) <ul style="list-style-type: none"> - Free public Education for all - Assembly line schooling - Bet fit business needs 1906 	<ul style="list-style-type: none"> • John Dewey  (1859-1952) <ul style="list-style-type: none"> - Progressive model - Experiential learning - Active Learning
---	--

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What Should Schools Look Like?

<p>Horace Mann  (Assembly line model)</p> <ul style="list-style-type: none"> - Best fit business needs in 1906 	<p>John Dewey  (Active Learning model) "Progressive"</p> <ul style="list-style-type: none"> - Better fit for Business today
--	---




<ul style="list-style-type: none"> - Assembly line thinking - Designed to produce drop outs (20% graduation rate was the target in 1920) - Taught punctuality & obedience 	<ul style="list-style-type: none"> - Move at your own pace - Individualized , - Self motivating - More complete, fewer holes (not like Swiss cheese)
--	---

30

What does a 21st Century School look like?

1. Fits Learning Style of Student:
 - Viewed as relevant & motivating to students,
 - Results in "time on task" increase.
2. Includes 21st Century Skills:
 - Expanded basics.
3. Viewed as a choice school by parents:
 - "Opt in" or stay with traditional school.

(Scalable)
4. Must be transportation neutral (to parents):
 - available at neighborhood school,
 - not a magnet.

Two Simple Tests

Test 1 – Nonsense syllables

- 1 ABC 123
- ↓
- 2 MGT 031
- ↓
- 3 OPT 279
- ↓
- 10 XYZ 789



Test 2 – Problem solving



Two Simple Tests

Test 1 – Nonsense syllables

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Test 2 – Problem solving



What Should Schools Look Like?

- **Horace Mann**
- Best fit business needs 1916
- **John Dewey**
- Active Learning

34

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36

What Should 21st Century Schools Look Like?

- Look to Staff Development for a clue... it doesn't work.
- The reason is... kids above the 8th grade are bored stiff.

36


What Should 21st Century Schools Look Like?

- Look to Staff Development for a clue... it doesn't work.
- The reason is... kids above the 8th grade are bored stiff.
- *Exercise* - Design a school where discipline is not a problem...

37


What Should 21st Century Schools Look Like?

- *Exercise* - Design a school environment where discipline is not a problem...



38

What Should 21st Century Schools Look Like?



- Sports, Athletics
- Summer camp,
- School newspaper / Year book
- Performing arts
- Debate, Speech
- Music
- Student Council

- Kids are engaged, working on common goals, accomplishing a task, communicating, learning ...
- All are 21st Century skills

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Skills for the 21st Century:

- Basic, scientific, & technology literacy
- Visual & information literacy
- Cultural literacy and global awareness
- Adaptability/managing complexity
- Curiosity, creativity & risk taking
- High order thinking & sound reasoning
- Teaming, collaboration & interpersonal skills
- Personal & social responsibility
- Interactive communication
- Prioritizing, planning and managing results
- Effective use of real-world tools
- Relevant, high quality products

Source: <http://www.21stcenturyskills.org/>

40

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Source: <http://www.21stcenturyskills.org/>

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States that have joined with the P21 to update their standards and assessment:

- Arizona
- Illinois
- Iowa
- Kansas
- Louisiana
- Maine
- Massachusetts
- Nevada
- New Jersey
- North Carolina
- South Dakota
- West Virginia
- Wisconsin

Source: A review of 21st century essential skills and state graduation requirements - Oct 2009 : <http://sites.google.com/a/sw.wednet.edu/step-by-step-how-and-why-you-need-to-become-a-21st-century-school/>

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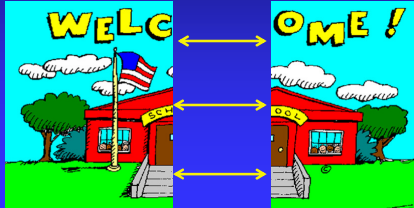
Step One

- **Step 1** You already have (traditional) Horace Mann school(s),
- **Step 2** - Split the school(s):
 - Offer a Active Learning model as an option
 - Start small and build over time with attendance



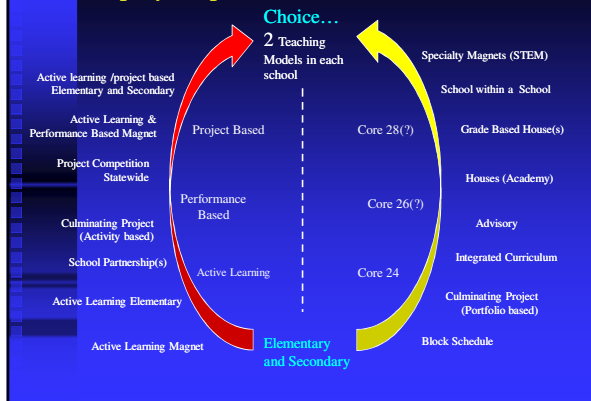
Step Two

- Step 1 You already have (traditional) Horace Mann school(s),
- Step 2 - Split the school(s):
 - Offer a active learning model as an option
 - Start small and build over time with attendance



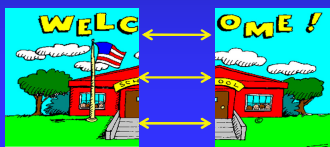
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Step-by-Step (Active Learning / Student Driven)



A proposal to consider...

Partner in a "Investment in Innovation Grant"
(\$650M available next years)



About Cedar River Academy

Active learning, Child-centered, Project based,
 Performance (not seat time) based,
 Low class size (18 to 1),
 Combined grade level classes (e.g., K-1, 1-2, 2-3, etc.)
 Transfers responsibility for learning from teacher to student,
 Automated Student tracking tools,
 Increased student motivation, resulting in increased time-on-task,
 Teachers work collaboratively
 Teacher as instructional leader,
 Secondary level teacher evolves to chief “learner” in the room.

<http://www.cedarriveracademy.com/>

Resource List

Books:

- A. “The World Is Flat” – Thomas Friedman – 2005 – 479 pages
- B. “Outliers” – Malcolm Gladwell
- C. “Brain Rules” – John Medina
- D. “Disrupting Class” – Christensen, Johnson & Horn
- E. “Outrageous Learning: An Education Manifesto” – Scott Oki
- F. “A Whole New Mind” – Daniel Pink
- G. “Frames of Mind: Theory of Multiple Intelligences” – Howard Gardner

50

Resource List

References:

- A. “It’s About Time.” National Education Association, 1993. NEA National Center for Innovation.
- B. “A Nation at Risk: The Imperative for Educational Reform.” National Commission on Excellence in Education, 1983. <http://www.ed.gov/pubs/NatAtRisk/index.html>
- C. “Prisoners of Time” National Education Commission on Time and Learning, 1994 (reprinted 2005). <http://www.ed.gov/pubs/PrisonersOfTime/index.html>
- D. “Time for a Change: The Promise of Extended-Time Schools for Promoting Student Achievement.” Massachusetts 2020 Foundation, Fall 2005. www.mass2020.org or w <http://www.ecs.org/html/document.asp?chouseid=6595>

51

Resource List

References (Continued) :

E. Teacher Quality and Student performance:

- * "Defining 'Highly Qualified Teachers:' What does 'Scientifically-Based Research' Actually Tell Us? (with Peter Youngs), Educational Researcher (2002).
- * "Reinventing High School" (with Jacqueline Anness and Susanna Ort). American Educational Research Journal (2002).
- * "Teacher Quality and Student Achievement" in Educational Policy Analysis Archives (2000);

52

Resource List

Schools

- Philadelphia's High School of the Future www.phila.k12.pa.us
<http://www.microsoft.com/education/schooloffuturedownloads.mspx>
- Center for Advanced Research and Technology - C.A.R.T. (Clovis & Fresno Unified School Districts – CA)
<http://www.cart.org/about/whatis.php>
- Aviation High School – Highline School District - STEM Magnet
http://www.aviationhs.org/about_us.htm
- Cedar River Academy – Enumclaw, WA - Private Pre K- 5
<http://www.cedarriveracademy.com/>
- University Child Development School – Seattle , WA – Private - PreK-5
<http://www.ucds.org/>
- High Tech High – San Diego, CA – Charter School
<http://www.hightechhigh.org/>

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Resource List

Schools:

- Tacoma School of the Arts – Tacoma Public Schools- Magnet
<http://www0.tacoma.k12.wa.us/schools/hsx/sota/>
- The Met- A network of 6 public high schools in metropolitan (Providence) Road Island – small school concept
<http://www.themetschool.org/Metcenter/History.html>
- Truman High School – Federal Way School District – Performance
<http://schools.fwps.org/truman/>
- Corbett School District - 35800 E Historic Columbia River Hwy Corbett, OR <http://www.corbett.k12.or.us/index.php>

Conferences:

NSBA T+L Conference - Phoenix, Arizona, October 20 – 22, 2010
<http://www.nsba.org/tl/>

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Resource List

- A. Step-By-Step web site:
<http://sites.google.com/a/sw.wednet.edu/step-by-step-how-and-why-you-need-to-become-a-21st-century-school/>
- B. George Lucas Educational Foundation
<http://www.edutopia.org/>
- C. Gates Foundation - High Schools for the New Millennium
<http://www.gatesfoundation.org/nr/downloads/ed/edwhitepaper.pdf>
<http://www.gatesfoundation.org/Pages/Search.aspx>
- D. Microsoft – School of the Future web resources
<http://www.microsoft.com/education/schoolofthefuture/>
- E. Matric Group (Cheryl Lemke) <http://www.netri.com>
- F. Partnership For 21st Century Skills – State Implementation Guides
<http://www.21stcenturyskills.org/>
- G. Cable in the Classroom – Spring 2006 – Threshold – Changing Course: New Thinking About High School Reform
<http://www.ciconline.org/archives> (search for: Changing Course:)

55

Resource List

- A. The Buck Institute (BIE) - Project Based Learning Handbook
http://www.bie.org/index.php/site/PBL/jplb_handbook/
- B. The Conference Board – Employer Survey - Are they ready to Work?
<http://www.conference-board.org/Publications/describe.cfm?id=1218>
- C. Washington State Report Card – OSPI web site – statistical data & downloads
<http://reportcard.ospi.k12.wa.us/summary.aspx?year=2008-09>
<http://www.k12.wa.us/safs/PUB/FIN/0607/fs.asp>
- D. State Board of Education – State by State Comparison – Oct 2009
A review of 21st century skills and state graduation requirements
<http://www.sbe.wa.gov/documents/2009-10-28%20states%20graduation%20requirements%20research.pdf>
- E. National Council on Teacher Quality – October 2009
Human Capital in Seattle Public Schools:
<http://www.nctq.org/n/publications/reports.jsp>
- F. 2 Million Minutes – The 21st Century Solution
<http://www.2mminutes.com/>
- G. Student Achievement and the Changing American Family:
http://www.rand.org/pubs/monograph_reports/MR535/index2.html#fn3

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Amusement Park



Lego Logo
1992

About Cedar River Academy

- K- 6 Private school – Enumclaw, WA
- Active Learning Model
- Maintains 18:1 student to teacher ratio
- Operates within OSPI per student distribution
 - under \$10,000 per student
- Heterogeneous student body (N=50)
 - Diverse (social, economic and abilities)
 - Includes ELL, and learning disabilities
- Maintain a 18:1 student to teacher ratio
- Students Test academically advanced - ITBS
 - Expanded basics

<http://www.cedarriveracademy.com/>

Proposal Outline

- A six year (joint public and private) project to monitor and report performance of a child-centered, constructive, and active learning school for pre-K through 12th grade
 - Would start with elementary grades and progress thru Secondary over a 6 year period
 - Project would be guided by an executive advisory board and jointly shared resources with Cedar River Academy (CRA)
 - Utilize your existing public school facilities and operate as a part of a local neighborhood school
 - operate within the State per student distribution of \$10,000 per student or less.

Project Deliverables

- Definitions of learning standards, student expectations, formative and summative assessments, learning continuums, student intervention plans, and professional development plans
- Teacher training materials, model teacher profiles, teacher observation guidelines, and teacher evaluation guidelines
- Operational performance reports to document the project's economic performance against objectives
- Quarterly student and school performance reports to document student learning performance against objectives
- Observation laboratory used by interested public school administrators and teachers to observe on-line, and on-site, the school and instructional methods and processes

Proposal Financial Projections

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Total Revenue	\$700,000	\$2,541,568	\$2,695,248	\$2,921,850	\$3,025,053	\$3,125,053	\$3,243,805
Parent tuition (assumed 15%)	\$0	\$381,235	\$426,787	\$453,277	\$506,258	\$506,258	\$531,571
Franklin Fund	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Foundation funding	\$700,000	\$2,010,333	\$2,118,461	\$2,318,572	\$2,368,795	\$2,468,795	\$2,562,235
Total Expenses	\$700,000	\$2,406,000	\$2,601,180	\$2,801,205	\$2,877,236	\$2,955,466	\$3,036,066
Gross Surplus	\$0	\$135,568	\$94,068	\$120,544	\$147,817	\$169,587	\$207,740
Performance Incentive	\$0	\$101,676	\$70,551	\$90,408	\$110,863	\$127,190	\$155,805
Incentive/employee	\$0	\$3,447	\$2,240	\$2,547	\$3,123	\$3,583	\$4,389
Surplus	\$0	\$33,892	\$23,517	\$30,136	\$36,954	\$42,397	\$51,935
Revenue per Student	N/A	\$9,344	\$9,294	\$9,487	\$8,794	\$9,064	\$9,430

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