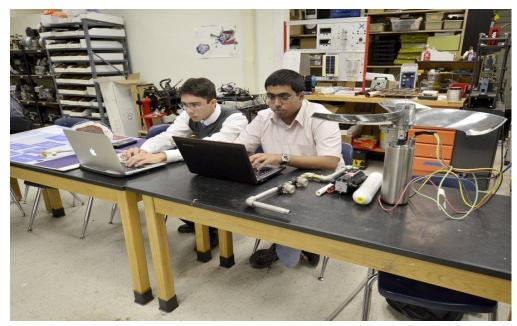


Designing the Future of Learning: Unthink School to Rethink Learning



Bryan Setser - Partner - 2Revolutions

ECCO-April 24, 2014

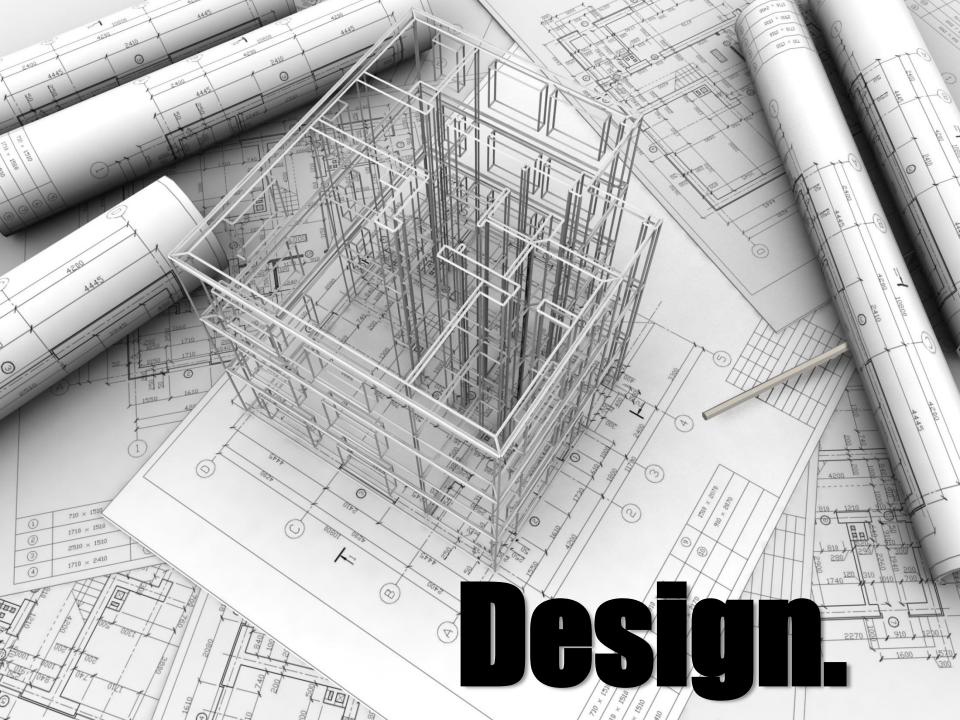
"You've got to go out on a limb sometimes because that's where the fruit is."

- Will Rogers



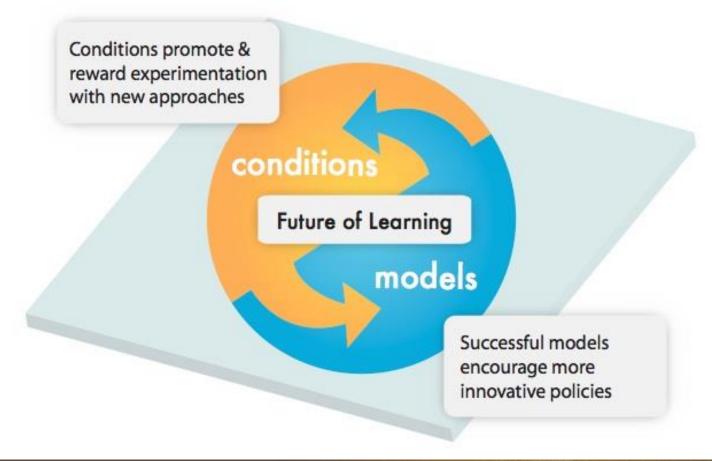
Objectives

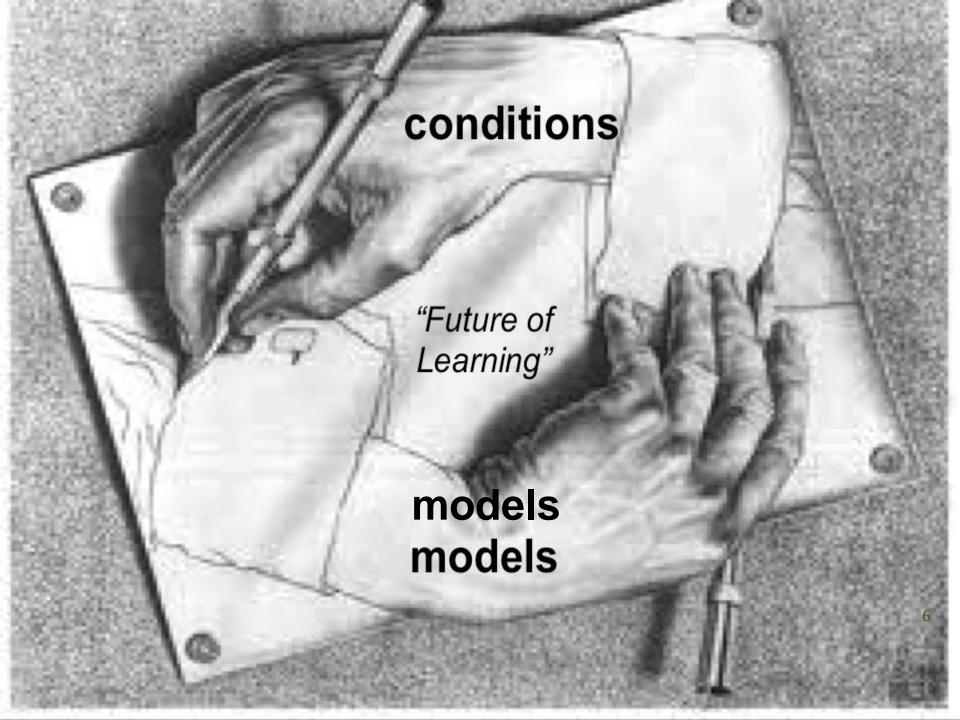
- 1. Introduce 2Rev's <u>Future of Learning framework</u>, taxonomy and philosophy
- 2. Share examples and trends of current <u>approaches to building</u> <u>next generation models</u>
- 3. Show you why design thinking matters to fuel innovation
- 4. Offer tools to help you prototype your ideas at this event and prepare you to execute in your district and in partnership with the regional early college model



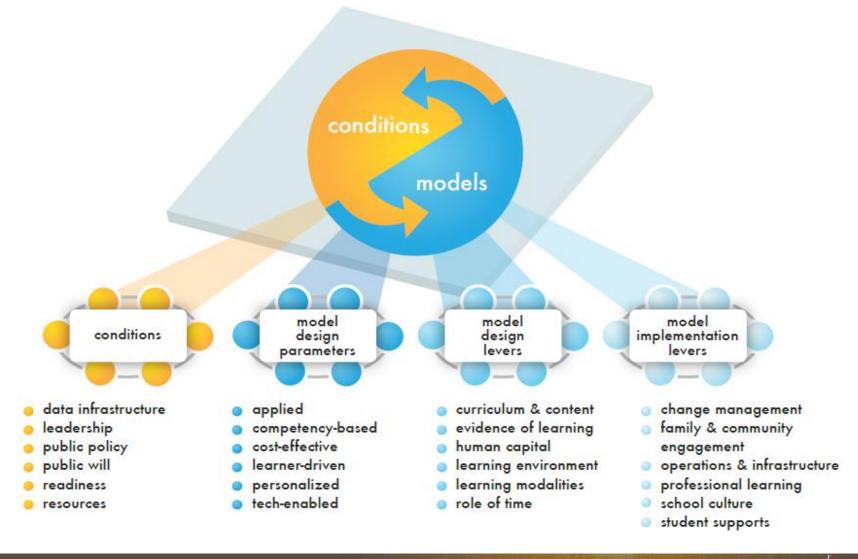
2Rev as Mission-driven Design Lab

2Rev designs, launches and supports Future of Learning <u>models</u> and catalyzes the <u>conditions</u> within which they can thrive.



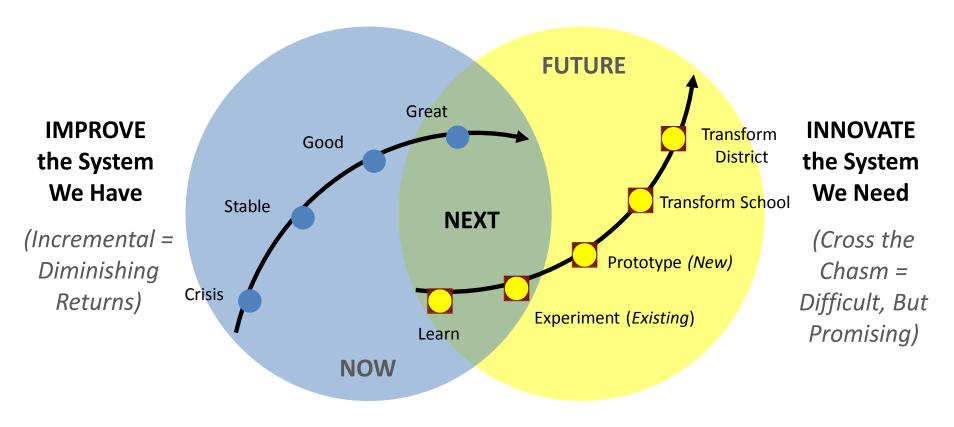


2Rev's Future of Learning Framework



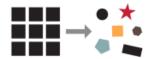
A "Both, And" Orientation

How can we jump from one curve to the next?

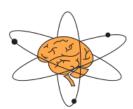


Trends Driving the Future of Learning

Drive Toward Personalization



3. Advances in the Science of Cognition

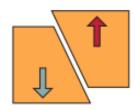


Increased Economic Pressures

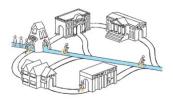




Explosive Growth in Technology



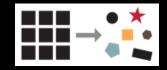
Shifting **Policy Environments**



6. **An Evolving Ecosystem** of Learning

9

Trend #1: Drive Toward Personalization



Students' learning experiences – what they learn, and how, when, and where they learn – are tailored to their individual needs, skills, and interests.

Students also develop deep connections to each other, their teachers and other adults.

Gates Foundation, 2014

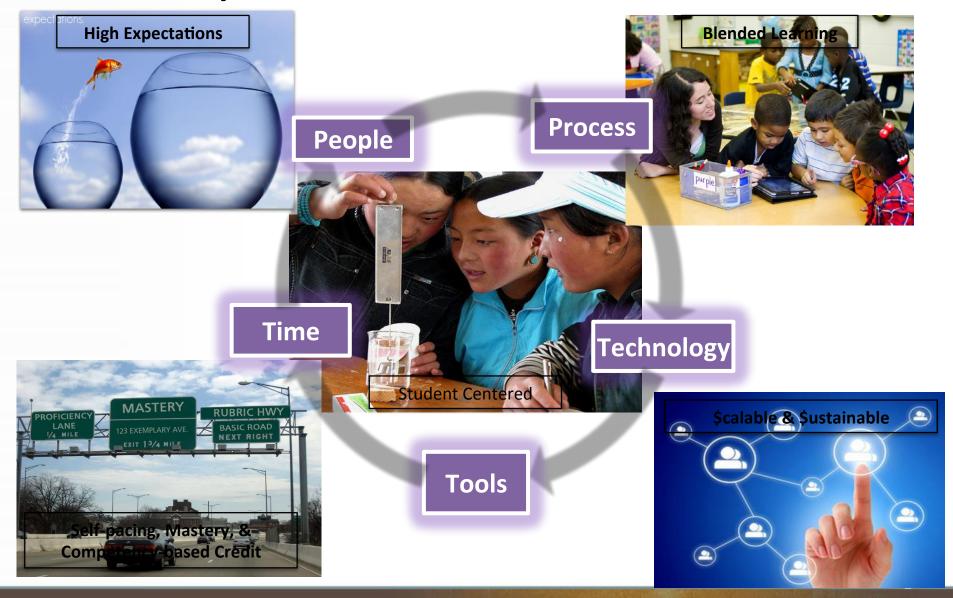


What Do We Mean By "Personalization" Anyway?

Does it refer to learning experiences for students that are ?

- a)Tech-enabled
- b)"Deeper"
- c)Interest-driven
- d)Applied/experiential
- e)Learner-driven
- f)All of the above?

Components of Personalized Performance

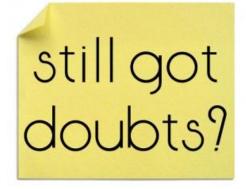


#ECCOHOPE



Personalization: A Peek Around the Corner...





#ECCODoubt



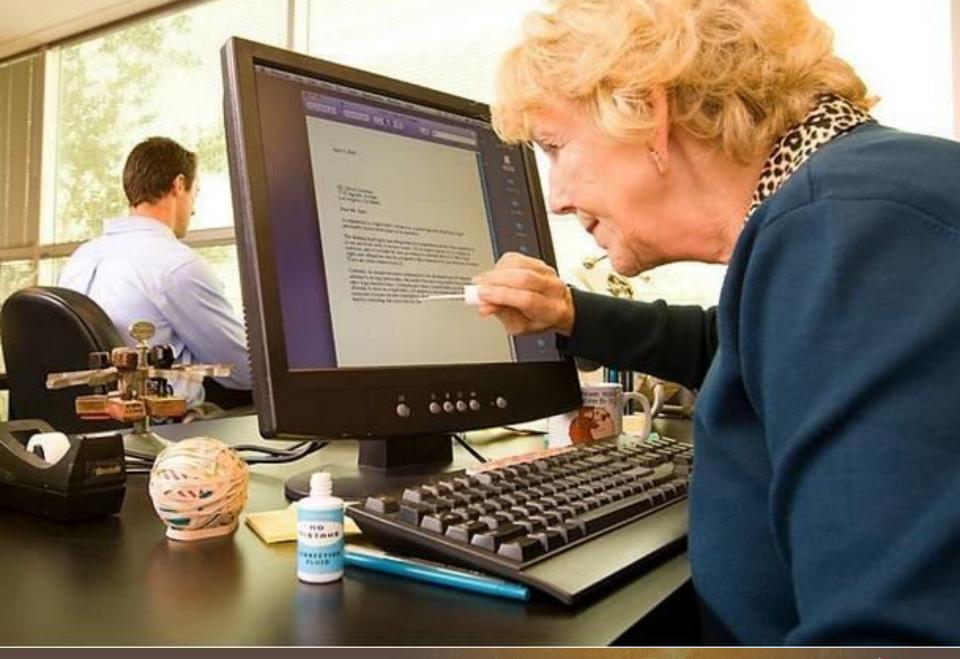
Trend #2: Explosive Growth of Technology

We live in the "age of the mathematician," in which inordinate power and riches will go to the people who create the algorithms that end up dictating who and what we know.

Yuri Milner – Russian Social Media Mogul













Recorded video



Context Participants Tools Files Flag

Date: Sunday 12 December 2010

Duration: 1 hour

Location: Rosebery School - Room:

Time: 07:35 PM - 08:35 PM

Hardware: Camera 1

Context: History

Purpose:

Notes:

Comments Forms Instruments

C29 Innovation Add

Professional Standards

- □ Instructions
- 1. Uses an appropriate range of teaching strategies
 - Inadequate
 - Satisfactory
 - Good
 - Outstanding

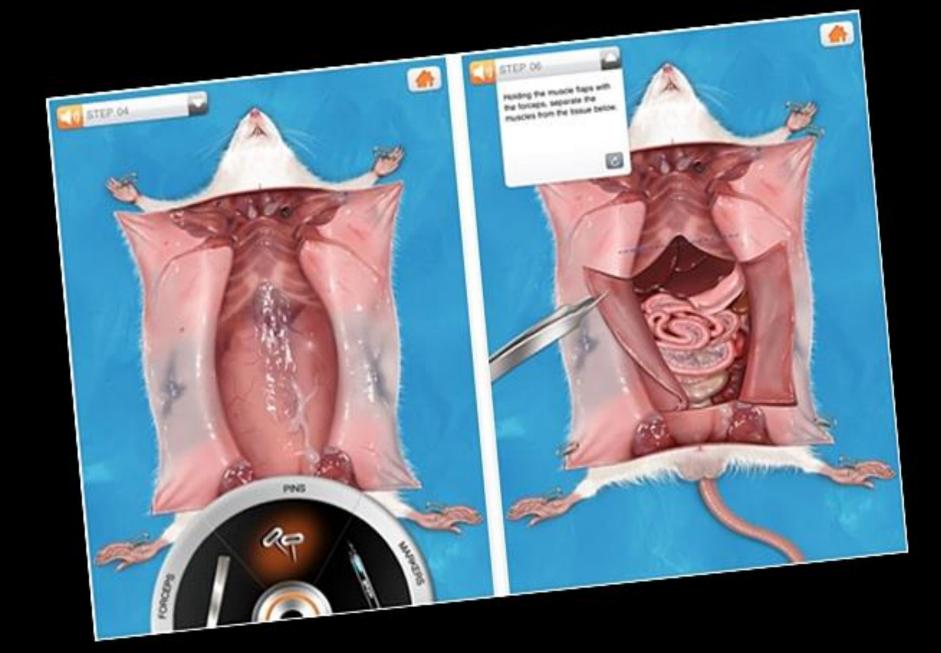
Timeline: 00:00:05 - 00:00:07

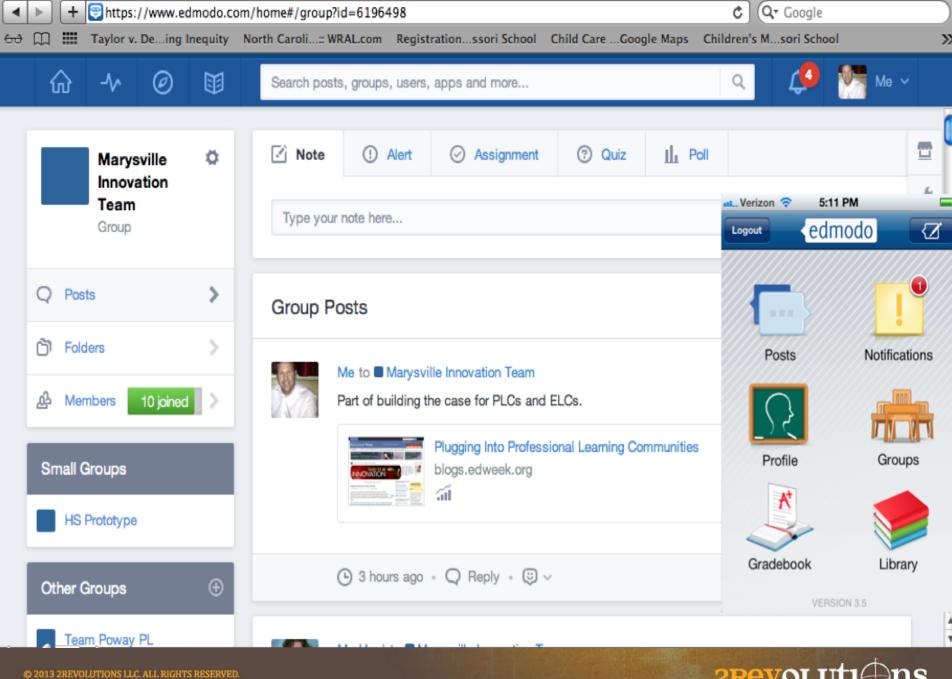
Start tag End tag

Note

This a great example of how you use different teaching strategies.

- 2. Uses appropriate resources, including e-learning, which meets learners needs
- 3. Builds on prior knowledge and attainment in order that learners meet learning objectives
- 4. Develops concepts and processes which enable learners to apply new knowledge, understanding and skills



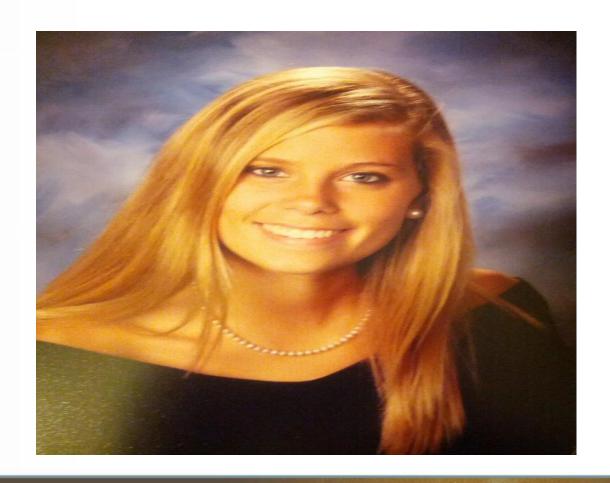


But before we get too enamored with technology.....



What problem are you trying to solve?

My daughter is 17 and she is an inexperienced driver......



The power of a testable IF/THEN hypothesis.....

IF I had an app that could track her location, THEN I could advise her and keep her safe at key points on her trip.



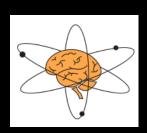


What problems have you solved?

Trend #3: Advances in the Science of Cognition

"There's a lot we don't know before we say we don't know that."

Mark Twain





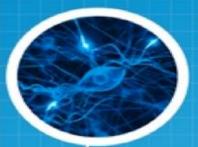


The Neurology of Gaming

Video games have both positive and negative effects on the human brain. They can be used to educate through repetition and feedback, but they also have some less-positive side effects:

The parts of the brain impacted by games

Different gaming scenarios and situations affect different areas of the brain by provoking certain reactions:



Game play involves repeated actions that strengthen the brain cell connections underlying memory and learning.



PREMOTOR &
PARIETAL CORTEX
Games that require
real-time action,
like 'Space Invader,'
activate these areas,
which control
sensory
movement.



One study claimed frequent players can get 'video game brain.' This means key parts of their frontal lobe become underused, which can after moods.



PREFRONTAL CORTEX

Games that require logical thinking, like 'Othello' and 'Tetris', activate this area, which controls decision making.





DOPAMINE

Dopamine, which is involved in learning and feelings of reward, is released in the brain's striatum during video game play.





ROSTRAL ANTERIOR CINGULATE CORTEX & AMYGDALA Areas that resolve

emotional conflict showed less activity while players fired a



How Neuroscience is Changing the Classroom





Later Start Times High schools are pushing back start times so students are more alert for class



Fewer Breaks

Schools are shortening summer breaks because research shows the more time a student spends away from school, the more he'll forget



Teachers are presenting lessons a variety of ways to improve retention



Cognitive Tutoring

Software lets students learn by doing and adjusts to their individual needs

Making Learning Fun

Studies show that people remember more when they enjoy an experience

Bryan Setse...ok Web App Taylor v. De...ing Inequity North Caroli...:: WRAL.com Registration...ssori School Child Care ...Google Maps

Explore

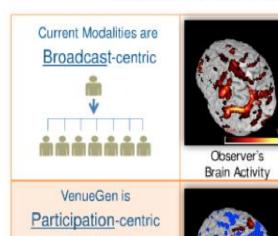


Learn & Support Sign up

Log in *



"Presence" creates better learning and a continuous communication feedback loop for teachers



"I tell you and you forget. show you and you remember. I involve you and you understand." - Confucius



Student Directed Discussion

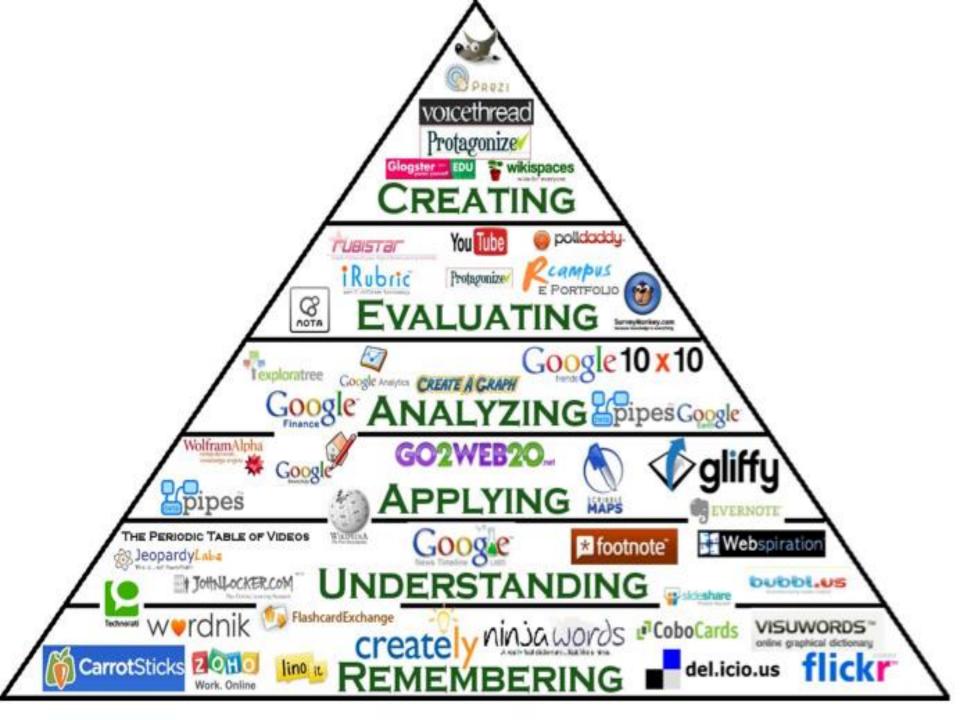
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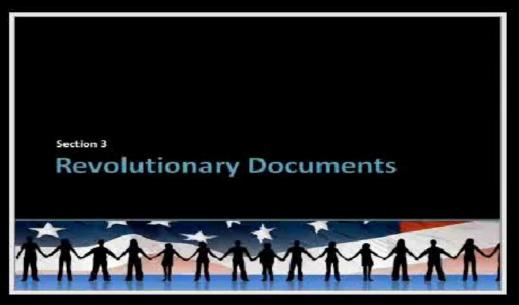
www.VenueGen.com

Participant's Brain Activity

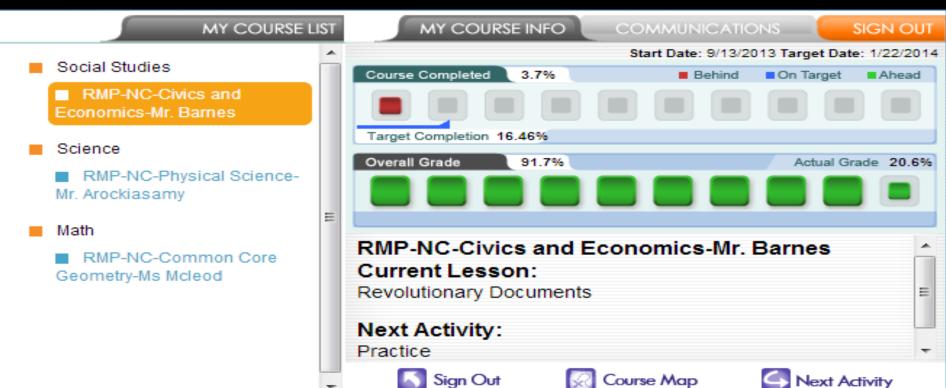
info@VenueGen.com

888.495.2810

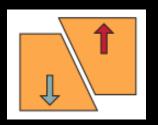








Trend #4: Shifting Policy Environments

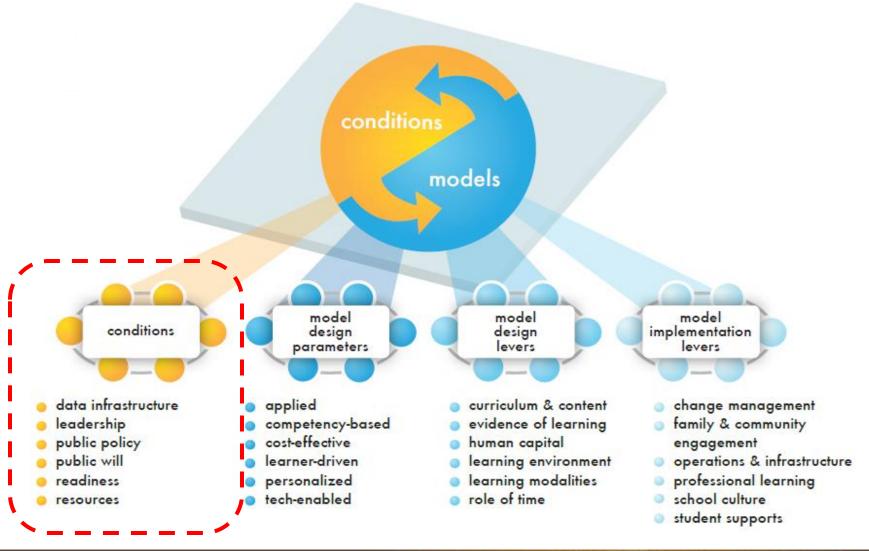


System context can be:

- <u>Preventive</u>: constrains innovation (intentionally or accidentally)
- <u>Permissive</u>: is open and allows innovation, but doesn't support it
- <u>Enabling</u>: explicitly promotes, enables and supports innovation



Where do the "4As" fit in the 2Rev Framework



Tools & Resources

Events

Grants

News And Media

Igniting the Power of Public Education

innovation collaboration capacity building

Expanded Learning Opportunities

Home » Expanded Learning Opportunities

The Colorado Legacy Foundation believes that increased student achievement for all Colorado students requires effective leaders in every school, effective educators in every classroom, and healthy and engaged students who come to school ready to learn.

Purpose and Overview



Latest News

Application for Funding to Enhance School Behavioral



COLORADO CONNECTED

Next Generation Learning Starts Here





Explore KnowledgeBase



Collaborate Join Networks



Learn Take a Learning Path



Build With Design Tools

MY DESIGN KIT

My Networks

MY NETWORKS











WHAT'S HAPPENING?



PBL 101 Webinar

February 14 in Rethinking Time &

Hello Thompson Team, Our partners at New Tech Network (NTN) are very eager to connect with you and provide



Check-in

February 14 in Rethinking Time &

Morning team, hope you are having a great week! Per our last conversation, I wanted to check-in on the progress on



PBL 101 Webinar

February 14 in Rethinking Time &

Hello Bayfield Team, Our partners at New Tech Network (NTN) are very eager to connect with you and provide

More

The New Hampshire Network connect.collaborate.learn.

Brought to you by





My E-Locker

Activity

My Networks

My Learning Paths

My Favorites

My Connections



I would like to hear from high school people who use PBIS or other data-driv...

February 11 in New Hampshire

Profanity? What sort of interventions? Consequences? Have you analyzed instances of verbal altercations and then designed any training for faculty to implement verbal deescalation techniques?



Multiple measures

February 9 in Teacher Effectiveness Network

As you consider multiple measures here are some questions that you might want to ask as well as approaches used by other states, with links to their sites.



Tools available today?

February 6 in Performance Assessment Network

Hi, I was wondering if Tool 15 and Tool 4 are available? Thanks



NH K-12 Nationally Aligned Science Competencies

February 6 in Performance Assessment Network

We are seeking feedback on this draft of the NH K-12 Aligned Science Competencies. Please take the time to review them and share them within your schools and districts.

SUPPORT MY LEARNING







SHOW ME SOMETHING COOL

THE CONTRACTOR OF THE CONTRACT

Team Coordination is K...Packing your team with the

most talented individuals doesn't necessar...



Desire2Learn ePortfolio

Desire2Learn® ePortfolio is a technology platform that allows stud...



Generation Schools Ne...

Founded in 2005, Generation Schools Network is a national



Purpose of Reports

This report is designed to inform you about the student's progress toward achieving the New Hampshire Grade Span Expectation (GSEs) Standards. The GSEs along with the skill expectations of your school establish high and challenging expectations for all students; describe what students should know, be able to do, and care about; and serve as a basis for curriculum, instruction, and assessment at the Sanborn Regional School District. The curriculum for each content area is based on the standards relevant to the area. This report however cannot communicate everything you might possibly want to know about your child's progress. This report should be considered with other information you receive from the school such as your child's work, the open house, conferences, and skills checklist provided by teachers throughout the school year. Communication between the family and the school staff is highly encouraged. If you have any questions or concerns, please contact your child's teacher or counselor.

Level	Letter	Numerical	Performance Descriptors for Academic Standards
Exceeding	E	90-100	The student consistently exceeds the performance standards for the grade-level. The student with relative ease, grasps, applies, generalizes, and extends key concepts, processes, and skills consistently and independently.
Meeting	М	80-89.9	The student consistently meets the performance standards for the grade-level. The student, with limited errors, grasps key concepts, processes, and skills for the grade-level and understands and applies them effectively.
In Progress	IP	70-79.9	The student is progressing toward meeting the performance standard for the grade-level. The student is beginning to grasp key concepts, processes, and skills for the grade-level, but demonstrates inconsistent understanding and application of concepts.
Limited Progress	LP	65-69.9	The student is making some progress toward meeting the performance standard. The student is not demonstrating understanding of grade-level key concepts, processes and skills and requires additional time and support.
Not Met	NM	50 - 64.9	The student has not met the standard
Not Yet Competent	NYC		The student is not yet competent
Insufficient Work Shown	IWS		The student has not submitted a sufficient amount of work yet to calculate a grade
Incomplete	I		Incomplete Grade
Satisfactory	S		Satisfactory Performance
Unsatisfactory	U		Unsatisfactory Performance 36





THE FUND FOR TRANSFORMING EDUCATION IN KENTUCKY



A NEW FOUNDATION SUPPORTING INNOVATION IN KENTUCKY SCHOOLS HOME **ABOUT US** INITIATIVES **PARTNERS** RESOURCES **NEWS AND MEDIA** BLOG THE STATE OF THE S

Trend #5: Increased Economic Pressure



Given the mounting pressure on state and local funding structures, it will become increasingly essential for schools and systems to think creatively about how to do more with less.



What is your current budget news?

2015

Finalize plan with implementation schedule. Present the plan to the broader community. Begin implementation of the first phase of the plan. Prepare marketing materials and text for website.

2017

Move into second phase of the plan. Establish working groups to determine most effective ways to improve faculty culture and student enrollment.

What does the budget look like next year?

Start



In response to accreditation feedback, build a strategic plan that address the key areas of concern and incorporates the input of all stakeholders.

Develop approach, review mission, set goals and framework

2016

Collect feedback from surveys and performance data. Adjust the plan as a "living document" based on new leadership, opportunities and/or threats.

2018

Incorporate recommendations into revised planning document. Begin accreditation self-study.







What could our budget look like?



Business Model Generation

Lean StartUp

Great by Choice

2nd Quarter 2014

Building on the success from the 1Q, the leadership starts the development of a scope and sequence for student product K-12. A teacher coaching process is established, and a pilot for blended learning is identified

4th Quarter 2014

Momentum is building with faculty, families, and donors because of the evidence of leadership and development. Fundraising target is increased because of greater donor engagement and higher quality. Research on master schedule for 2015-16

What are new budget options?



1st Quarter 2014

Having clearly identify the target market and value proposition, the team decided to focus on raising the school's TQ by collaboratively developing a teacher rubric, refining teacher recruitment & reorganizing the leadership

3rd Quarter 2014

Data from first 2 cycles provides valuable feedback. The board redesigns the school and chief performance assessment criteria, pilot is implemented, and marketing messages adjusted to reflect new narrative

1st Quarter 2015

Record open house participation because of raving fans. New master schedule adopted, hiring for 15-16 is complete, and faculty culture is high.





Rethinking Time/ Teacher of Record

Generation Schools	Conventional Model
200 days per year	180 days per year
7-8 hours per day	6-6 1/2 hours per day
14-18	28-34
1,100 hours per student	I-2 hours per student
In-class minilabs and more	Limited in-class access
50 or fewer students daily	150 students daily
3 classes per day	5 classes per day
2 hours every day	Typically 45 min. weekly
20 or more days per year	2-4 days per year
NYC: \$12,403	\$12,482
	200 days per year 7-8 hours per day 14-18 1,100 hours per student In-class minilabs and more 50 or fewer students daily 3 classes per day 2 hours every day 20 or more days per year





Profiled Innovator: Cristo Rey

Cristo Rey Jesuit College Prep (Houston, TX) serves disadvantaged students in urban communities that operates a Corporate Work Study Program that:

- provides an opportunity for students to work and earn 65-70% of their tuition
- operates as a non-profit employee leasing agent working with 133 corporate partners
- every student works in job-sharing teams of four to cover a standard business week (5 days/mo for each student)

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1	А	В	С	D	А
Week 2	А	В	С	D	В
Week 3	А	В	С	D	C
Week 4	Α	В	С	D	D



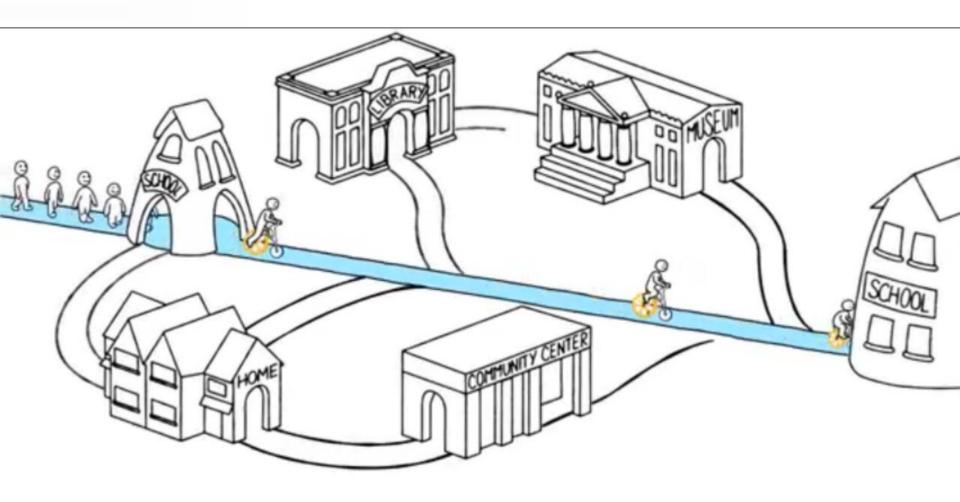
Trend #6: An Evolving Ecosystem of Learning

If you had enough resources, you could make the decision to go and live in France. You might also decide to not learn French. You would survive. You would be able to get by, but you would never be a full participant in the community. If you ever found yourself in a competitive situation you would fail. In comparison, remaining digitally unaugmented will leave you at a disadvantage measured in dozens of IQ points in the communities and learning ecosystems of tomorrow.

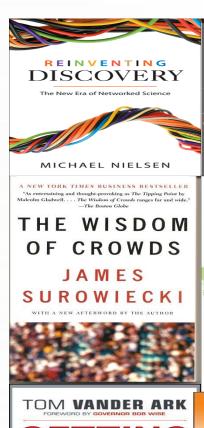
-- Richard Boyd

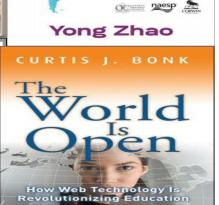


One Vision for an Integrated Learning Ecosystem...



A Summer Break Reading List



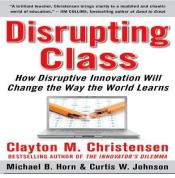


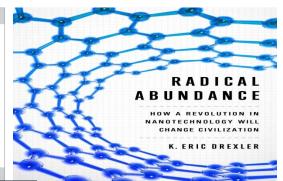
Recombinant

World Class

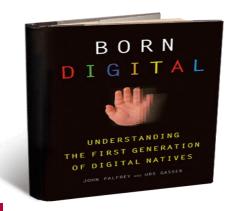
Education:

Educating Creative and Entrepreneurial Students











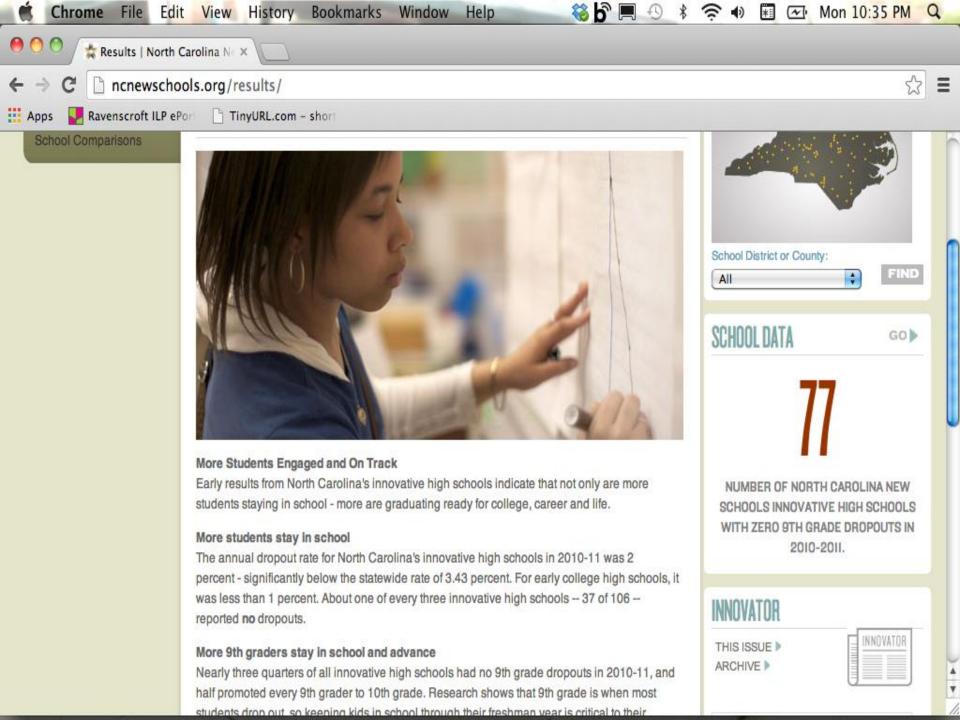


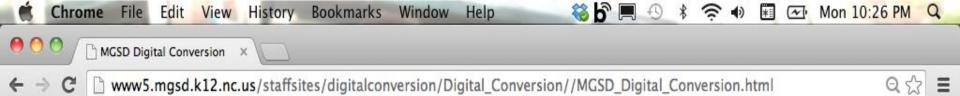


SMARI

How Digital Learning

Is Changing the World







MGSD Digital Conversion Academic Success Frequently Asked Questions In Perspective In The News

Ravenscroft ILP ePor

TinyURL.com - short

Apps

Summer Connection 2014

Dates are set: July 22-24, 2014

Click here for information

Interested in Visiting MGSD.....Click Here!



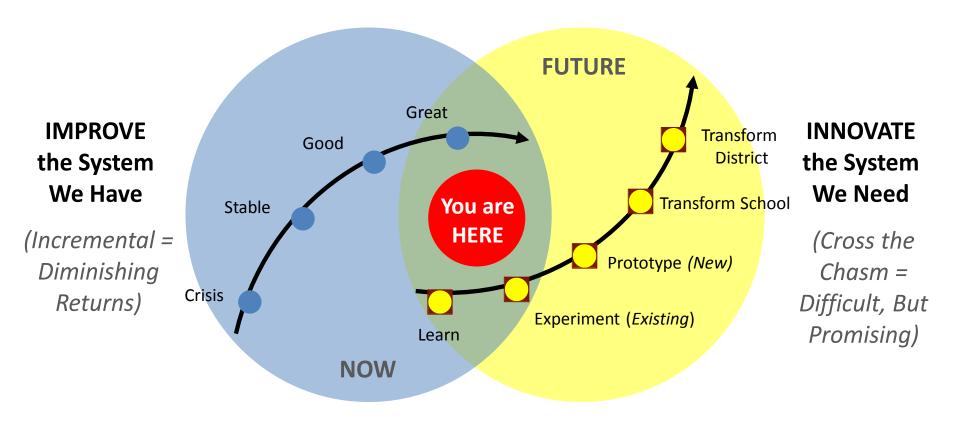
"There is nothing more difficult to take in hand, more perilous to conduct, than to take a lead in the introduction of a new order of things, because the innovation has for enemies all those who have done well under the old conditions and lukewarm defenders in those who may do well under the new."

Niccolo Machiavelli



REMEMBER: Innovation is a <u>VERB!</u>

A GPS for Next Generation Educators



So...where is the innovation?



Why does innovation happen?



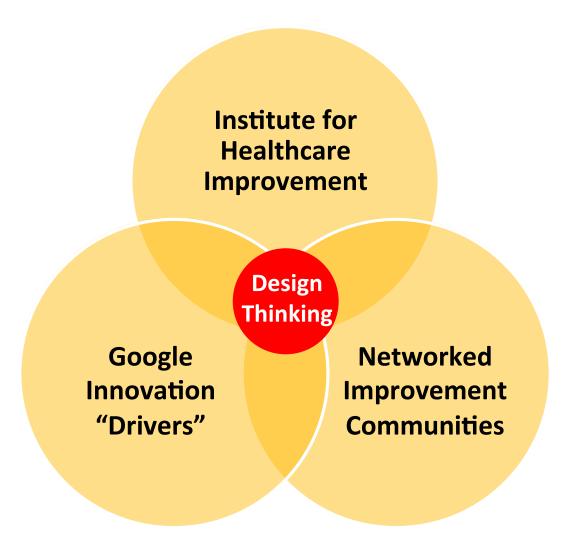
What is the Innovation?



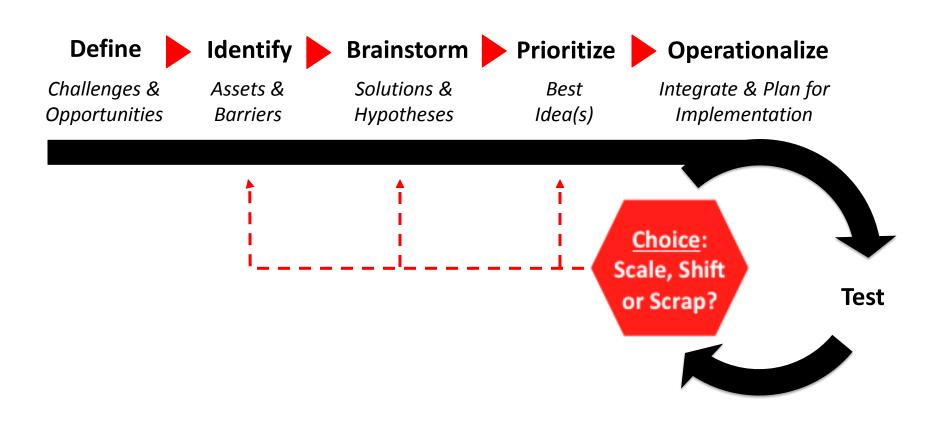
Does it happen in Education?



Role of Short-cycle Design



Short-cycle Methodology



Continuously Iterate Via "Short Cycles" to... See What Works!

Short-cycle Innovation: Personalization

<u>Challenge</u>: Alternative school wants to <u>move toward personalization</u>, but doesn't know where to start.

Solution/Hypothesis: By using student-facing ILPs combined with online learning, we can personalize learning for all students – to move them further faster.

<u>Prototype</u>: Use an ILP as a living profile of students in 9th grade, allowing them to move based on math readiness using an online module. Conclude 8-week prototype with student-led conferences reflecting on their math learning.

<u>Outcome</u>: A majority of students (~70%) showed greater progress over this 8-week period than in two preceding periods, and the combination of ILP and student-led conferences showed promising increases in student meta-cognition.

Next Step: School elected to <u>Scale</u> their effort – expanding the work to new band of grade 9-10 teachers that will set up a new prototype. Also currently investigating whether the right LMS can serve as platform to manage the work more deeply over time.

Your Mission, If You Choose to Accept It...

In our final few minutes, type in your phones or write yourself a note or two:

- 1.List one or more <u>problems/challenges</u> you must overcome, or <u>opportunities</u> you want to pursue;
- 1.Brainstorm <u>"if/then" statements</u> to identify potential solutions with testable hypotheses; and
- 1.Determine what you need to learn over the next two days to advance your thinking.

We'll check back in with you tomorrow or as a follow-up to assess your progress and help you prepare to execute your ideas!

"Great ideas, when they appear, seem muddled and strange. They are only half-understood by their discoverer and remain a mystery to everyone else."

- Neils Bohr





Designing the Future of Learning: Unthink School to Rethink Learning



Design Activity #1

I have so much to tell...





Early College High School Partnership

What is it:

A dynamic, innovative high school designed to help at-risk student populations take the first steps towards earning college certificates or degrees.

Focused on:

- offering high school & college courses to meet graduation requirements
- Providing access to the college's student services





Early College High School Partnership

What does it look like:

- Migh school on a college campus
- Student-owned, self-paced, mastery-based learning
- Student-centric environment with high expectations; providing learning guidance, coaching and supports to develop independence
- Authentic student assessments
- Applied learning opportunities to deepen competencies
- Online and blended learning including digital portfolios and other innovative technology resources and tools
- Specialized professional development for teachers and staff





Early College High School Partnership

<u>How:</u>

Supportive, collaboration, commitment, and partnership across multiple school districts

What will be accomplished:

- More students completing high school prepared for college
- Increased college access, enrollments and completion rates
- School prototype that can be replicated across the state and nation.
- © Recognition and appropriate funding from the state for the value that the early college high school prototype brings to the state's efforts to meet its education goals.





Let's do a table talk and digital exercise on the 4 As based upon what you've heard:

- •What **(A)**greements need to be made?
- •What (A)rguments are needed?
- •What (A)ssumptions can you make?
- •What **(A)**spirations do you have?

Please table talk, elect a spokesperson, and then we'll record audience reaction on a <u>padlet</u>



Designing the Future of Learning: Unthink School to Rethink Learning



Defining Success & Identifying Barriers





How the Principal explained the need



How the leadership team understood it



What the data said about it



How the appointed committee might design it



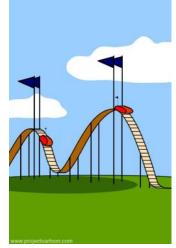
How the faculty understood it



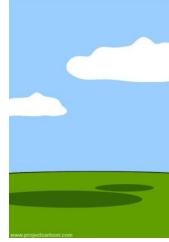
How procurement services describes it



What the school expected to pay a company to build it



How the school was billed



How the work was documented



What the school actually needed



Defining Success

What do your students need to know and be able to do in the complex future that awaits them after they graduate?

Identifying Barriers

If there is so much agreement on the definition of success, why aren't institutions already preparing students for this future?

What's preventing you?

Contact Info

Bryan Setser

Partner

Priscilla Maynor

Design Manager

Follow at Twitter, FB, LinkedIn, G+, or

www.2revolutions.net

Do What You Love, For Good