

Designing the Future of Learning: Unthink School to Rethink Learning



Bryan Setser and Priscilla Maynor – 2Revolutions

ECCO-April 25, 2014

Introductions

- Name and Role
- 2. One thing you are excited about today or with ECCO
- 3. One thing you have a question about or would like to know regarding the future of learning?



Agenda

8:30	Welcome and Introductions
8:40	Future of Learning Design Session
10:30	Break
10:45	Prototype Design Session: Part 1
12:00	Lunch and Prototype Design Session: Part II
1:15	From PLC to PLN: Leadership 2.0
2:00	INSPIRED 90 Day Cycles
2:30	Evaluation and Next Steps



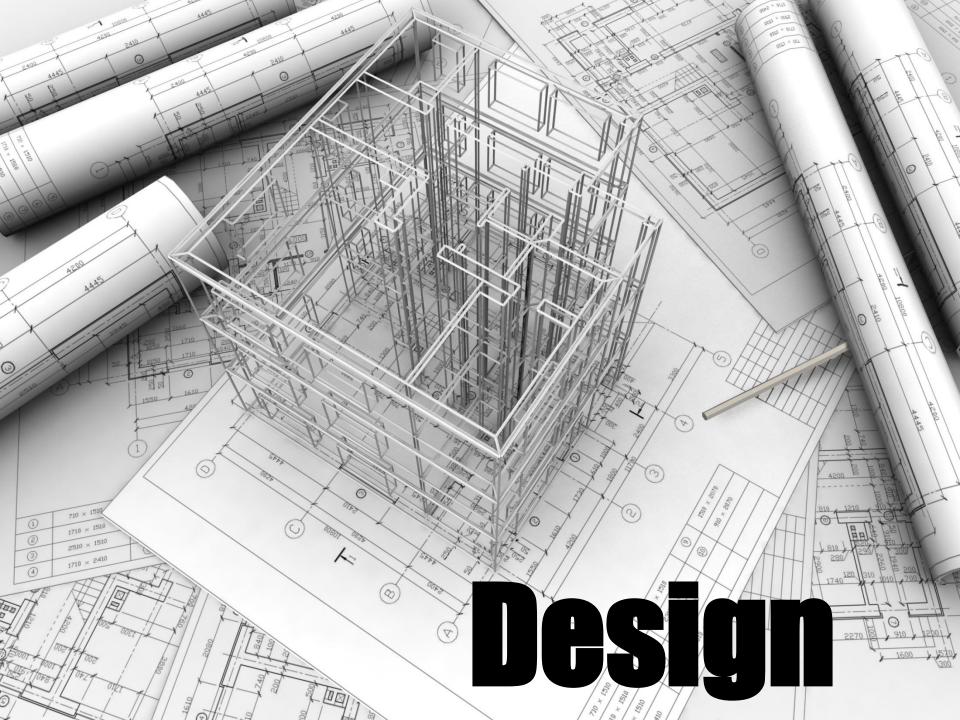
"You've got to go out on a limb sometimes because that's where the fruit is."

- Will Rogers



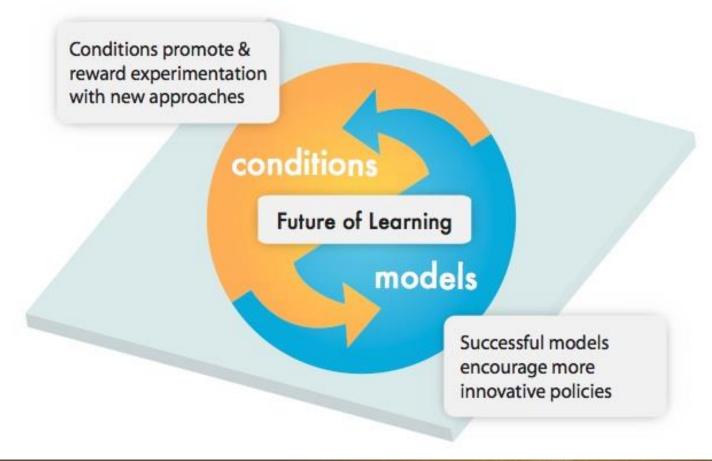
Objectives

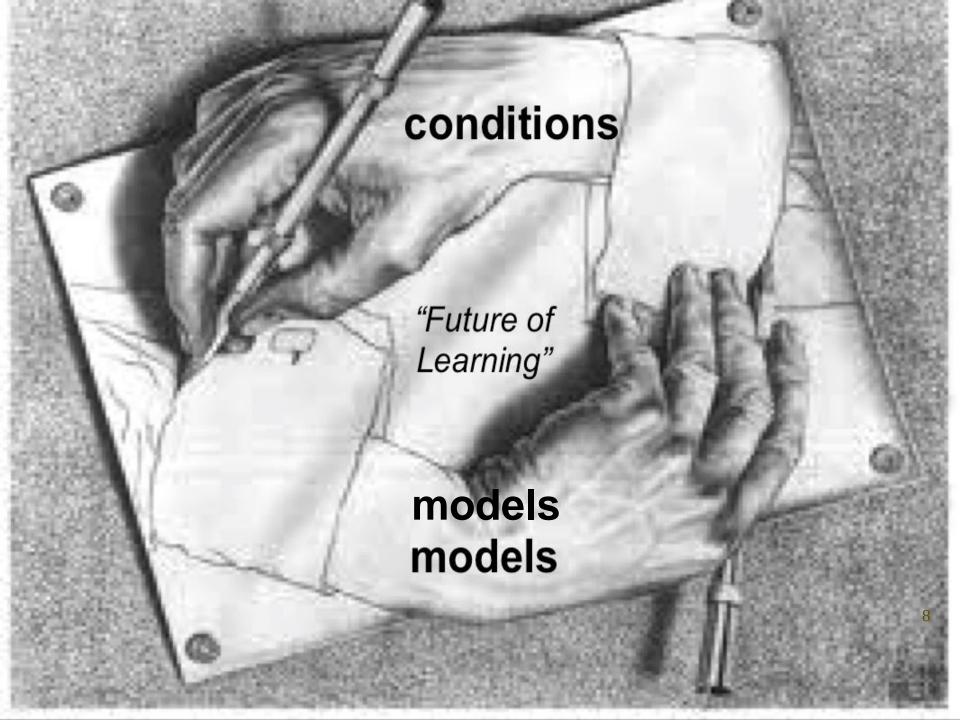
- Introduce 2Rev's <u>Future of Learning framework</u>, taxonomy and philosophy
- 2. Share examples and trends of current <u>approaches to building</u> <u>next generation models</u>
- 3. Show you why design thinking matters to fuel innovation
- 4. Offer tools to help you prototype your ideas at this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



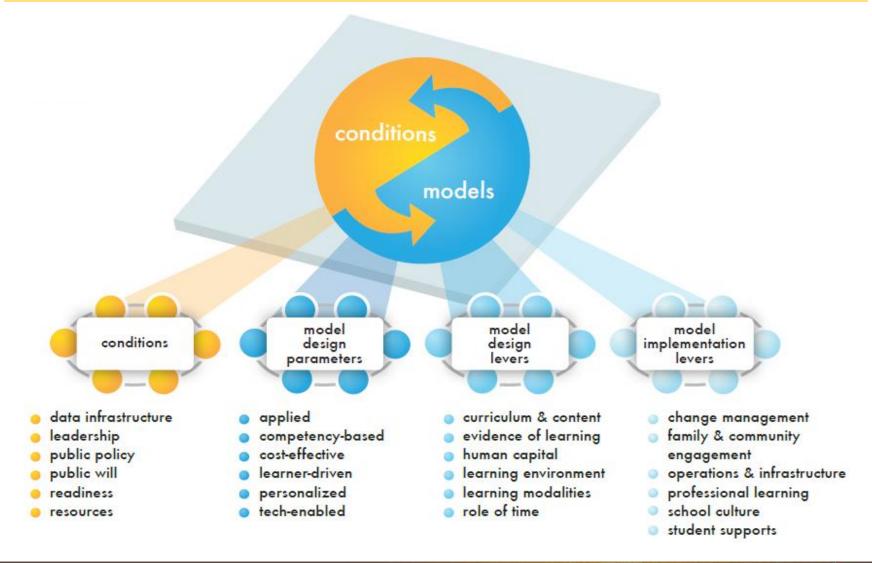
2Rev as Mission-driven Design Lab

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



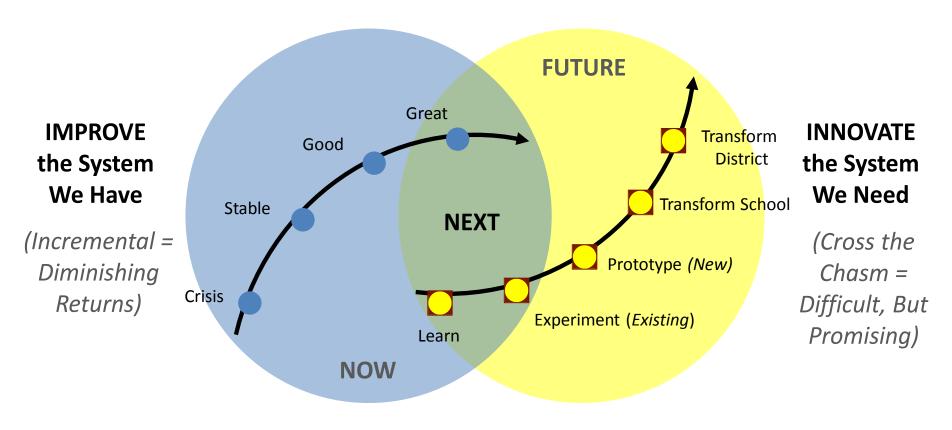


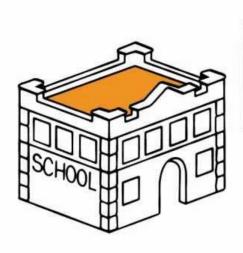
2Rev's Future of Learning Framework

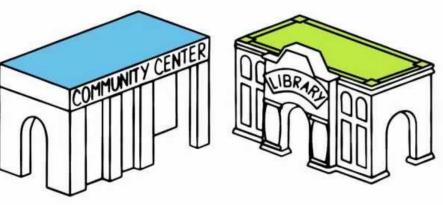


A "Both, And" Orientation

How can we jump from one curve to the next?

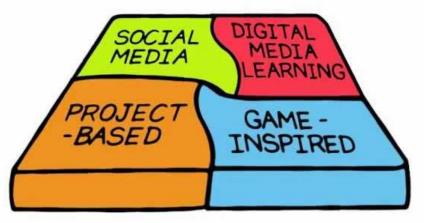










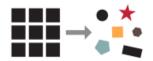


Video TA and NTK

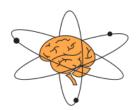


Trends Driving the Future of Learning

1.
Drive
Toward
Personalization



3. Advances in the Science of Cognition

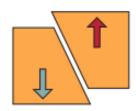


Increased Economic Pressures

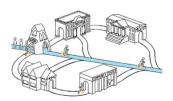




2.
Explosive
Growth in
Technology

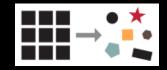


4.
Shifting
Policy
Environments



6.
An Evolving
Ecosystem
of Learning

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

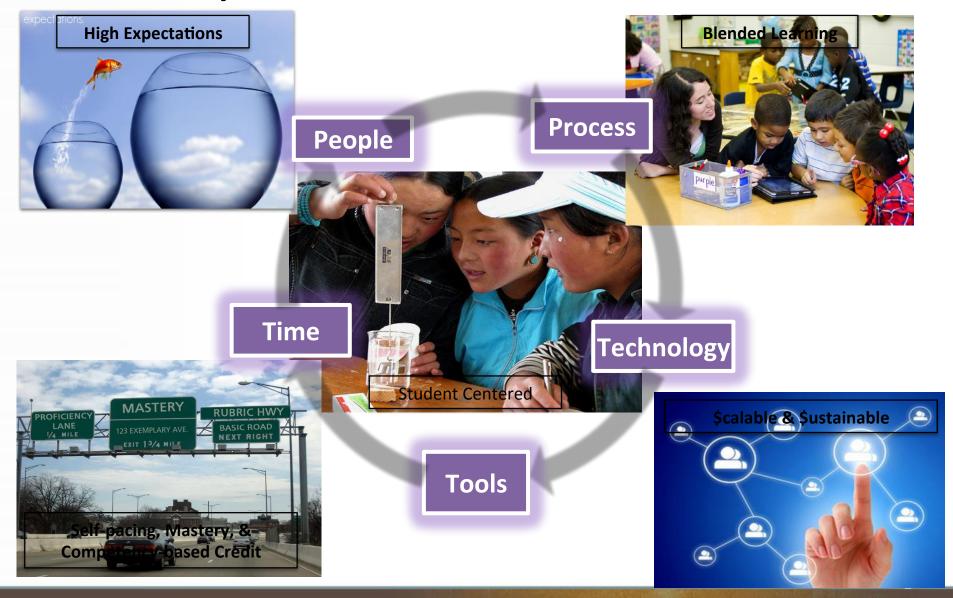


What Do We Mean By "Personalization" Anyway?

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



5 Simple Questions

Student voice in a classroom is a powerful tool of engagement. But to create that culture of student inquiry, good questions are essential. Here are 5 good ones, useful at any time, in any lesson.

"What do you think?"

Share with a neighbor before sharing with me Best used after a statement, prediction, conclusion, or observation. Students will often need for us to provide clarity on what we mean by "What do you think?" Ironically, the simplicity might confuse them.

Push students to provide more depth and reason for their answers.

"Why do you think that?"

How do you know this?

When this question is asked, students can make connections to their ideas and thoughts with things they've experienced, read and have seen.

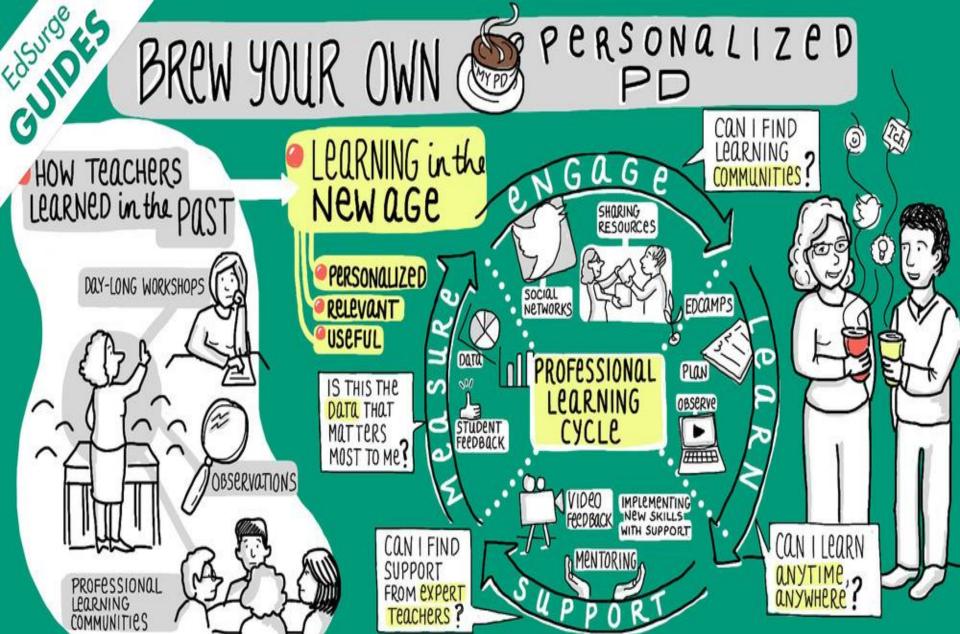
This question challenges students to extend their thinking and share further evidence for their ideas.

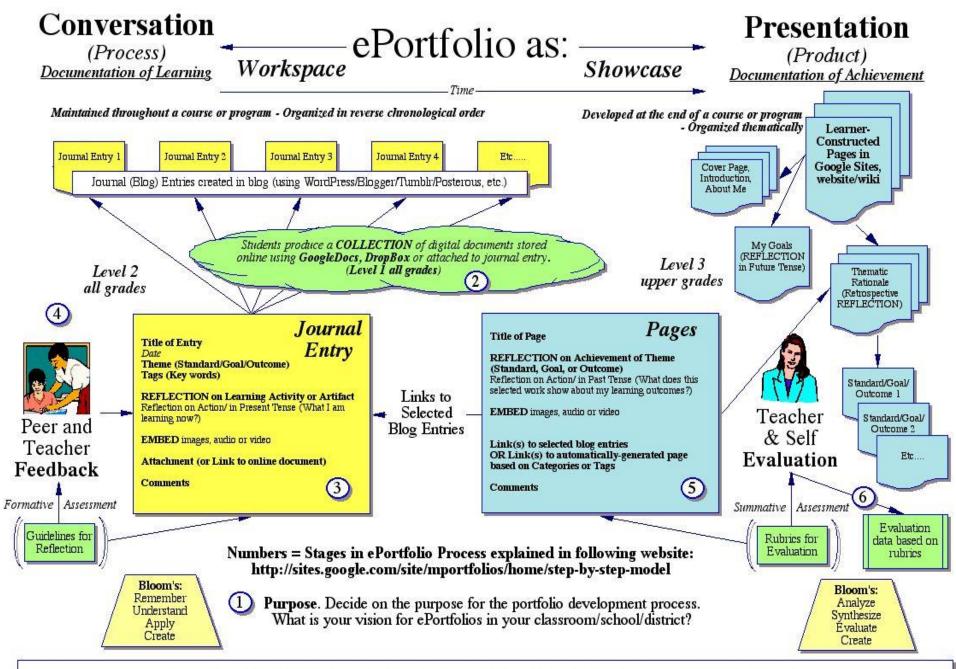
Can YOU tell me more?"

"What questions do you still have?"

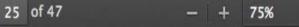
Questions like this require patience - wait time, but also time for students to get used to asking questions, not just answering them.

Brevity is a part of why these are simple, yet powerful questions. They require students to provide the weight, depth and complexity to a conversation.





Creating K-12 Electronic Portfolios Using 1-to-1 devices and Web 2.0 tools ©2010, 2012, Helen C. Barrett, Ph.D.



Page:

Personalized Professional Develop	ment
and Practice	

	Knowledge	Skill Acquisition	Classroom Application	Student Effect Sizes*
Present Information	40-80%	10%	5%	0.01
Present + Model	80-85%	10-40%	5-10%	0.03
Present + Model + Practice + Feedback	80-85%	80%	10-15%	0.39
Present + Model + Practice + Feedback +	90%	90%	80-90%	1.68
Coaching				

National Staff Development Council, 1995; Fullan, 1991; Joyce & Showers, 1984; Joyce & Showers, 1988; Mehring, 1999.





A Academics



Settings

DEMO ACADEMY

Course Dashboard

Course Dashboard



View course dashboard modules below

5th Math

SHOW

Skills

Subskills

Skills to Celebrate		
4.08 Percent	100%	Ш
5.08 Real-life Word Problems	100%	Ш
4.2 Read, write, compare, order whole numbers	100%	Ш
5.12 Find Unknown Quantities in Number Sentences	100%	Ш
5.10 When to Estimate and When to use exact answer	100%	Ш

Skills to Spiral and Reteach		
5.20 Identify Appropriate Tools to Measure	51%	Ш
6.07 Decimals	59%	ıll
5.21 Measure Angles	65%	ıll
5.16 Elapsed Time	68%	ıll
5.11 Ratios and Proportions	69%	Ш

Jack Aaron scored over 11 assessments	100%	Ш
Kelly Lesure scored over 19 assessments	88%	Ш
Javier Arciniega scored over 19 assessments	86%	ıll
Kurt Leaton scared over 19 assessments	86%	111
Elmo Toadvine scored over 19 assessments	84%	Ш

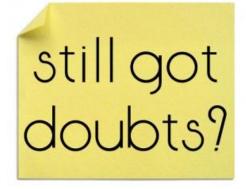
Academic Watchlist		
Robert Jones scored over 6 assessments	50%	ıll
Chance Carin scored over 24 assessments	63%	ıll
Armand Vay scored over 19 assessments	65%	Ш
Wyatt Recek scored over 24 assessments	67%	ıll
Jesse Vanderark scored over 19 assessments	68%	Ш

#ECCOHOPE



Personalization: A Peek Around the Corner...





#ECCODoubt



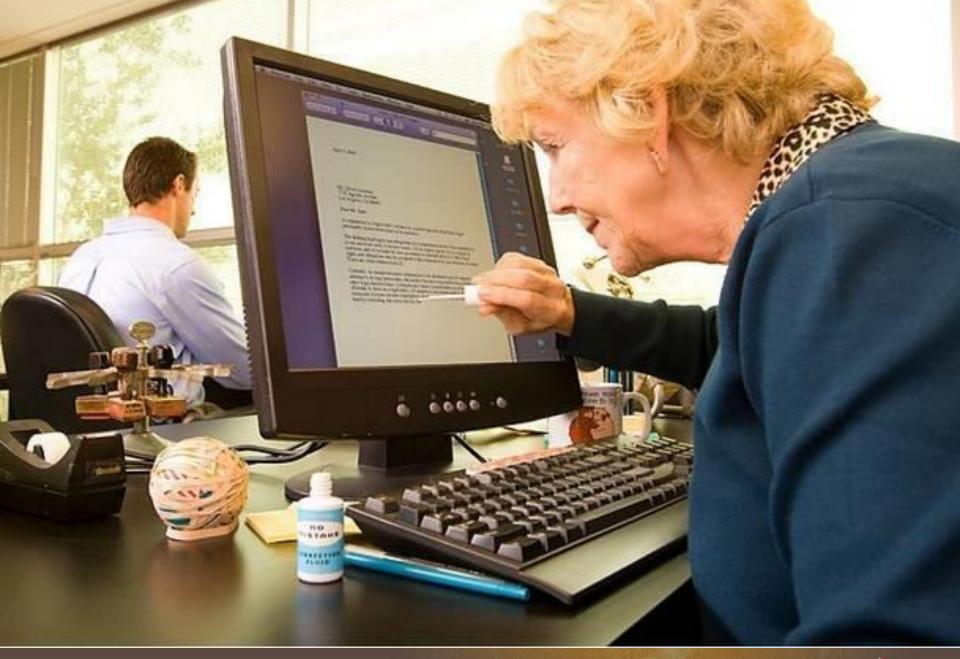
Trend #2: Explosive Growth of Technology

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

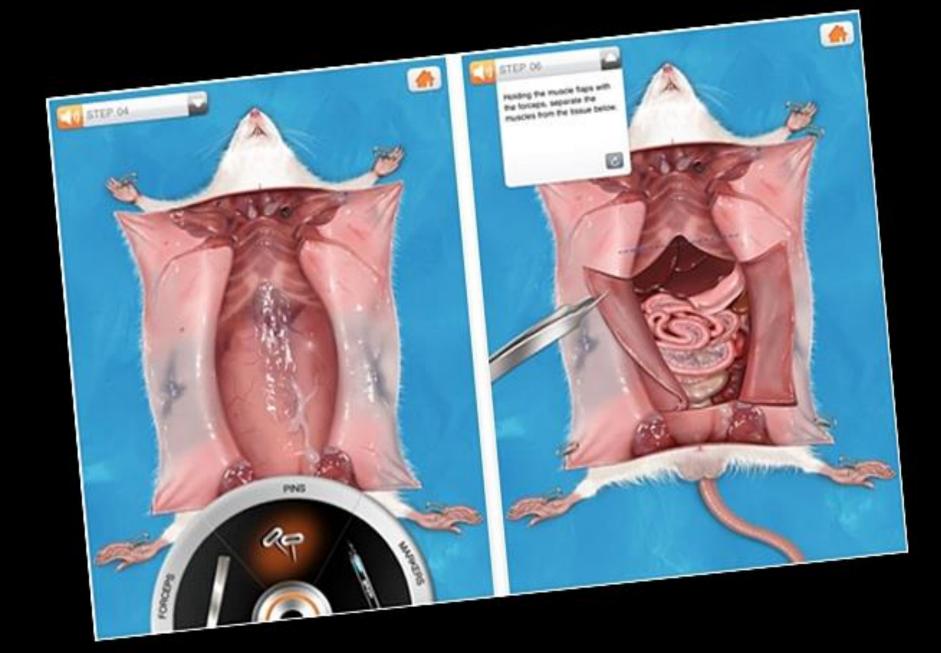
Timeline: 00:00:05 - 00:00:07

Start tag End tag

Note

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

- 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







HOME MATH GAMES

RESOURCES

REVIEWS

MEMBERSHIP

?



GET A FREE TRIAL NOW!

Teachers, create your own FREE account at Mangahigh. Students will be able to save their scores, earn medals and access Prodigi.

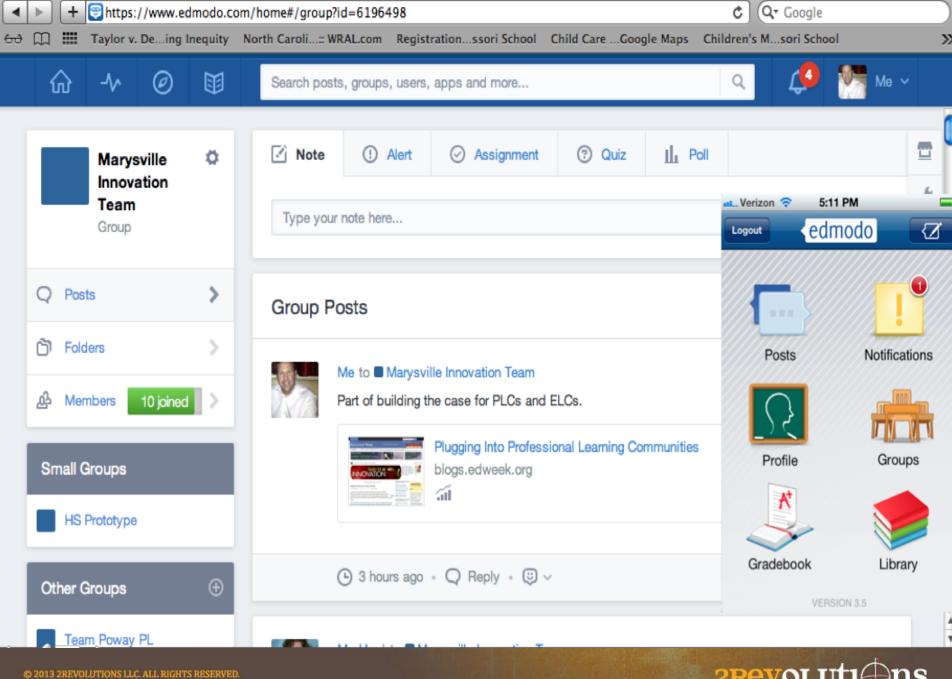
Create School



Play Now

Achievements

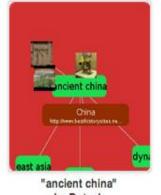
expand

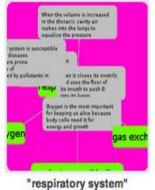


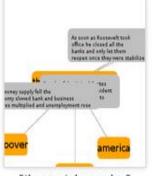












"japan tsunami 2011" by aa7dcc9a8

by Dptech

by 02fd91ff2

"the great depression" by tpenjo

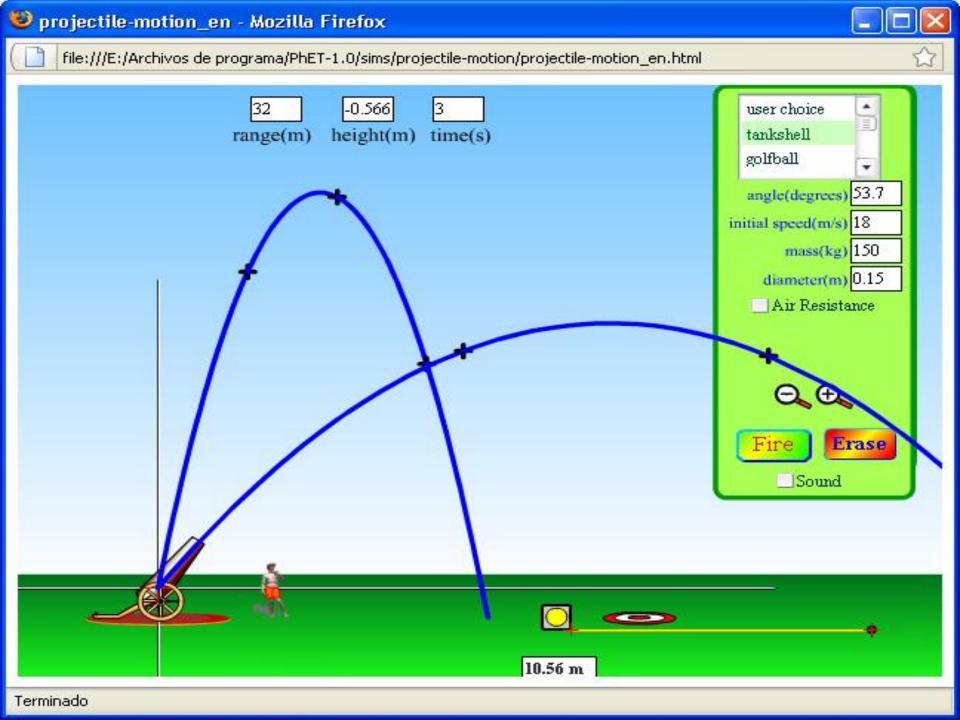


A JOURNEY THROUGH 13.8 BILLION YEARS OF HISTORY

Consider the big questions about our Universe, our planet, life, and humanity.

From the Big Bang to modern day to where we are going in the future, Big History covers it all.







EdTech O

Leadership O

Learning •

HIGHER ED & POST SEC, LEARNING, ONLINE & BLENDED, PREK-12 / January 22, 2014 BY Guest Author

4 Innovative Online Teaching Tools for Computer Science

93



У Tweet ₹77

Pinit 1

By: Julie Perrigan

As today's computer technology becomes more complex and useful, it's important for computer science majors to stay ahead of the curve. Every company, industry, and even a growing number of households rely on a variety of technological devices for their communications, operations, and security needs. The good news is that with all of this



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ADVOCACY PARTNER

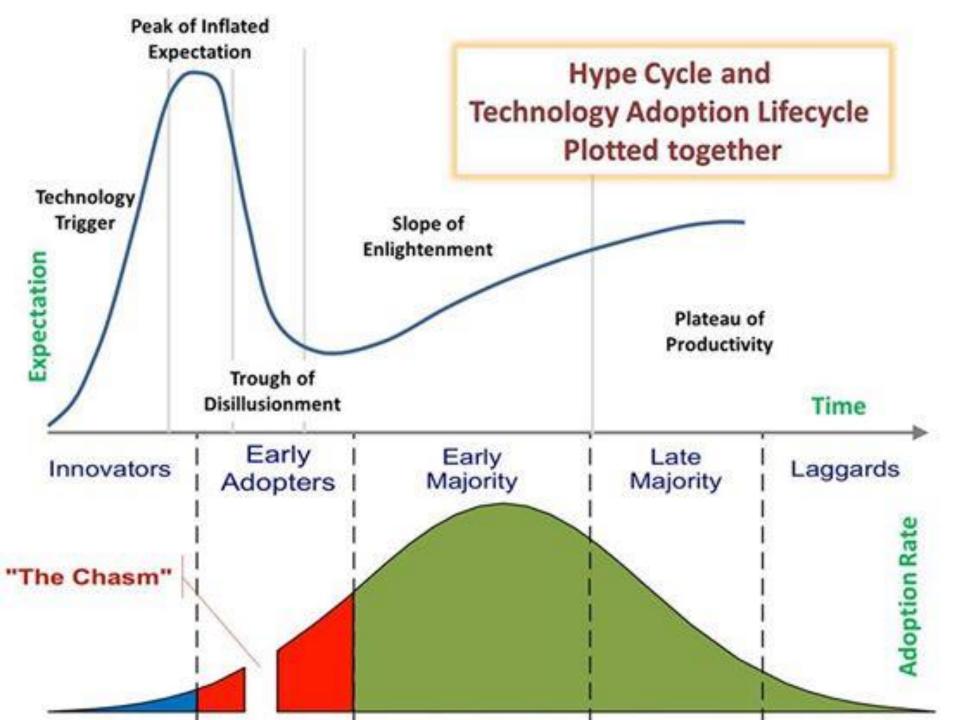


ADVOCACY PARTNER

Events



new technology comes even more convenient ways to learn more about computer science. Below are a handful of

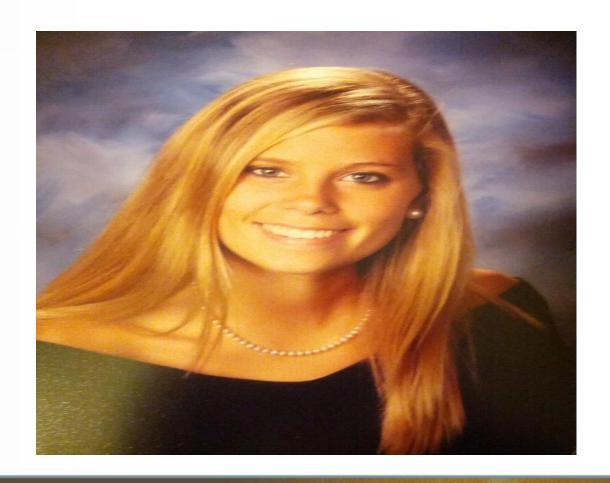


But before we get too enamored with technology.....



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.



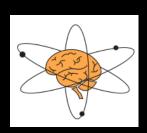


What problems have you solved?

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 alter 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

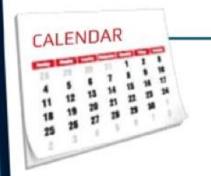


How Neuroscience is Changing the Classroom





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



Q Google



Create

Learn & Support

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

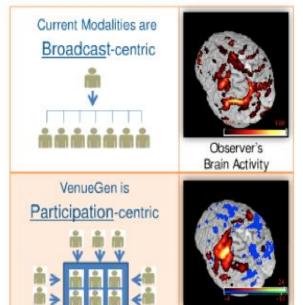
Explore

Sign up

Log in *



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



"I tell you and you forget.

I show you and you remember.

I involve you and you understand."

- Confudus



Student Directed Discussion

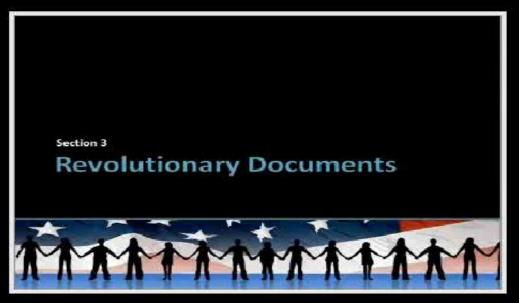
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www.VenueGen.com

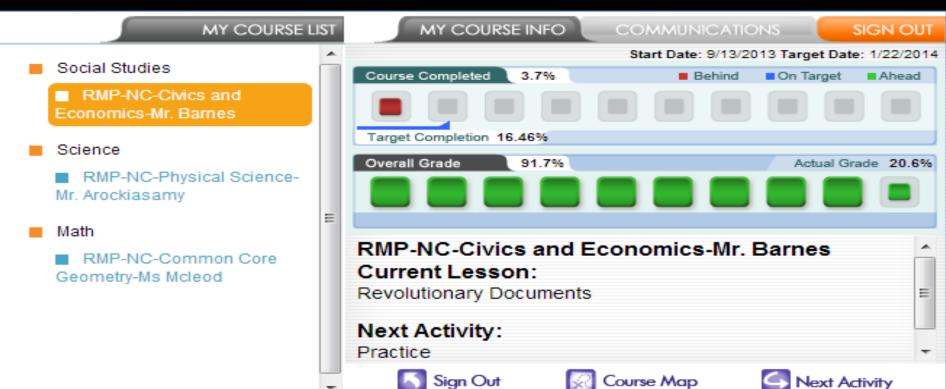
Participant's Brain Activity

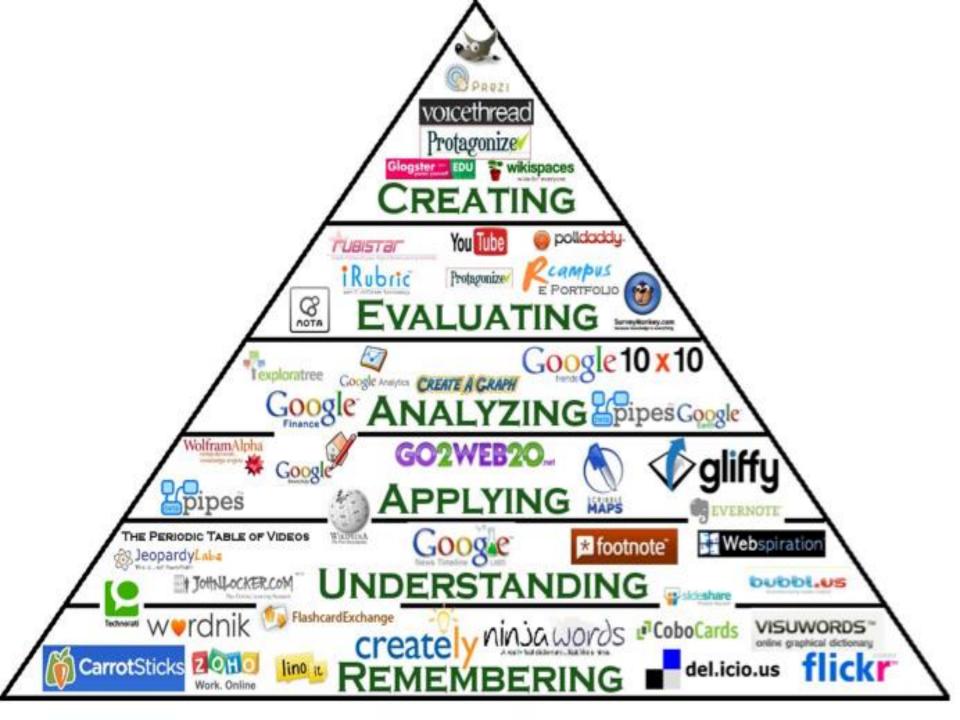
info@VenueGen.com

888.495.2810









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 3





Let's do a table talk and digital exercise on the 4 As based upon the standards based report card from New Hampshire:

- •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>



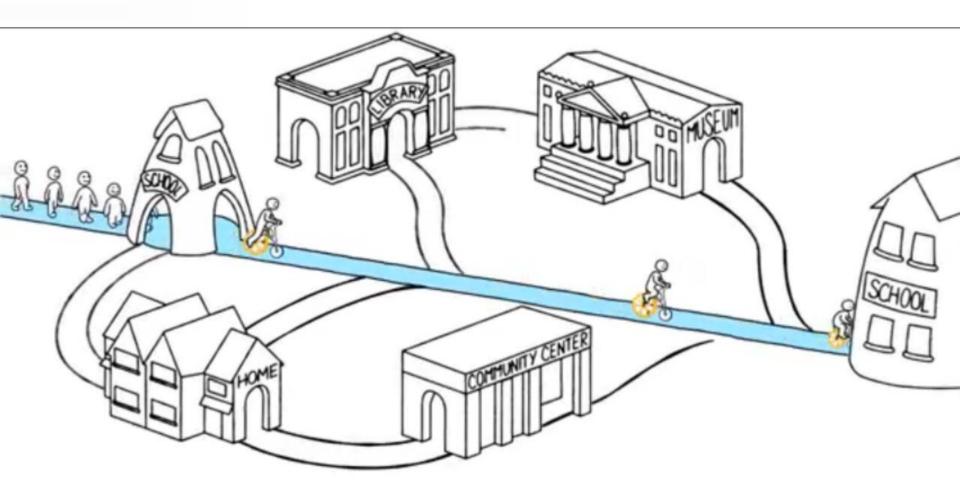
Trend #6: An Evolving Ecosystem of Learning

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.

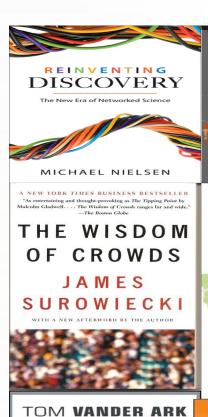
-- Richard Boyd

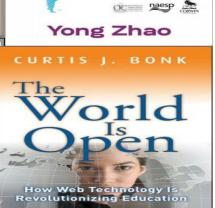


One Vision for an Integrated Learning Ecosystem...



A Summer Break Reading List



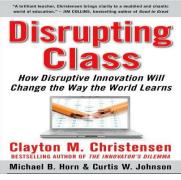


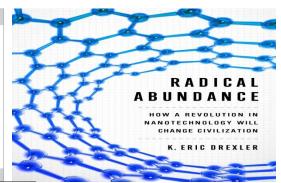
Recombinant

World Class

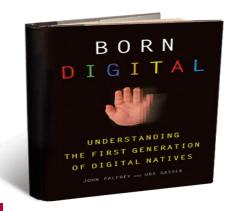
Education:

Educating Creative and Entrepreneurial Students













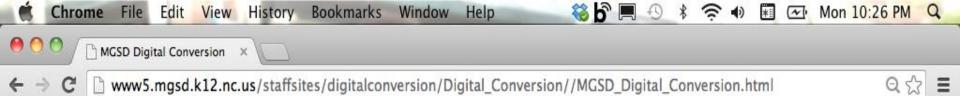


SMARI

How Digital Learning

Is Changing the World







MGSD Digital Conversion

Apps

Ravenscroft ILP ePor

Academic Success

Questions

In Perspective

In The News

TinyURL.com - short

Dates are set: July 22-24, 2014

Click here for information

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



Rethinking Time/ Teacher of Record

Key Advantages	Generation Schools	Conventional Model	
1 Europeded loosping time for all students	200 days per year	180 days per year	
1. Expanded learning time for all students	7-8 hours per day	6-6 1/2 hours per day	
2. Small class size in all Foundation Courses	14-18	28-34	
3. Exceptional college and career guidance	1,100 hours per student	I-2 hours per student	
4. Technology enhanced learning	In-class minilabs and more	Limited in-class access	
5. Reduced student load for teachers	50 or fewer students daily	150 students daily	
6. Reduced course load for teachers	3 classes per day	5 classes per day	
7. Expanded common planning time	2 hours every day	Typically 45 min. weekly	
8. High-caliber professional development	20 or more days per year	2-4 days per year	
All without increasing costs.	NYC: \$12,403	\$12,482	





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	А	В	С	D	D



So how do you define at ECCO?

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?

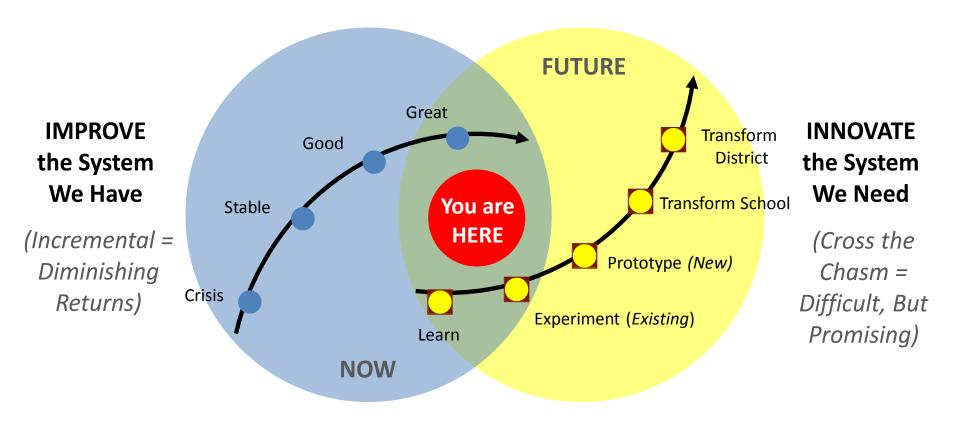
"There is nothing more difficult to take in hand, more perilous to conduct, than to take a lead in the introduction of a new order of things, because the innovation has for enemies all those who have done well under the old conditions and lukewarm defenders in those who may do well under the new."

Niccolo Machiavelli



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

A GPS for Next Generation Educators



So...where is the innovation?



Why does innovation happen?



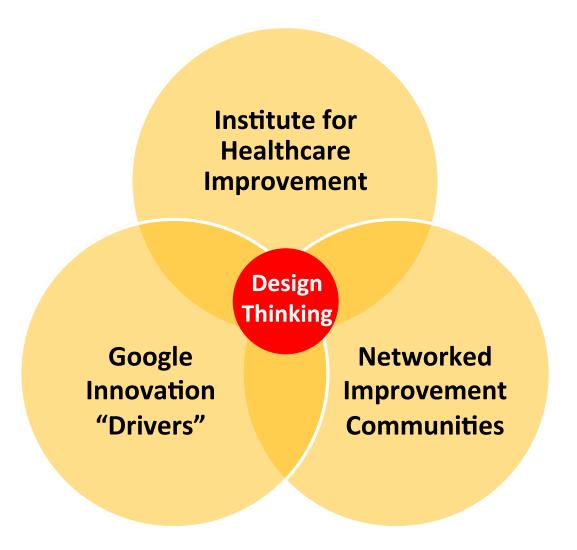
What is the Innovation?



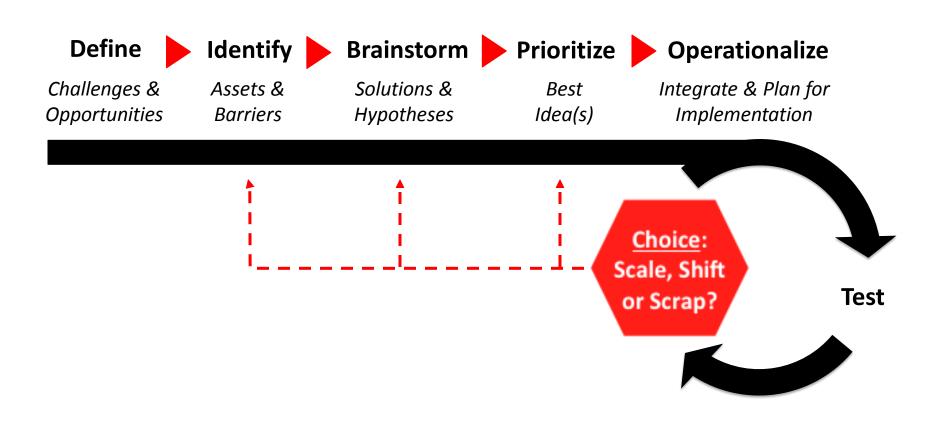
Does it happen in Education?



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.

Short-cycle Innovation: Explosive Growth of Technology

<u>Challenge</u>: Alternative school wants to differentiate instruction enabled by technology for all learners but is unsure where to start.

Solution/Hypothesis: By using Edmodo, students will be able to manage, track, and showcase student work through badges and groups that allow teachers to check in, coach, instruct, and differentiate activities for all students in a 9th grade English class.

<u>Prototype</u>: Use Edmodo and related tools for 16 weeks with students in the 9th grade English class to assess and deliver differentiated apps, instruction, and peer groups to meet all learners where they are.

<u>Outcome</u>: A majority of students showed greater growth on formative assessments as a result of being provided differentiated ways to showcase learning on Edmodo.

Next Step: School elected to <u>Scale</u> their effort – expanding the work to 9th grade math and will set up a new prototype. Also currently investigating whether they can use Get Clever.com to bring in other assessment and differentiation tools.

Short-cycle Innovation: Ecosystem of Learning

<u>Challenge</u>: Students do not use external town resources or world wide web networks to augment their ability to leverage ecosystems of learning.

<u>Solution/Hypothesis</u>: If students are given access to town resources and experts over the web, they will more likely produce college and career ready skills.

<u>Prototype</u>: Each student in 11th grade will pair up with a town mentor and 4 experts over the web to choose college and career ready adventures using a Google site to track all progress. They will be trained by a teacher/school facilitator who will be charged with ensuring that standards and evidence of learning are collected on the Google site. They will be asked to give quarterly face to face presentations of their progress using Google presenter.

<u>Outcome</u>: Students showed 10% growth on baseline of college and career ready metrics provided by <u>David Conley</u> during a 16 week period.

Next Step: The district intends to expand the mentor and expert services to other sites.

DESIGNISA GOLD SOUR Prototype roadmap

Personalization Criteria for Success Blended Learning



From PLC to PLN: Leadership 2.0

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.





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.

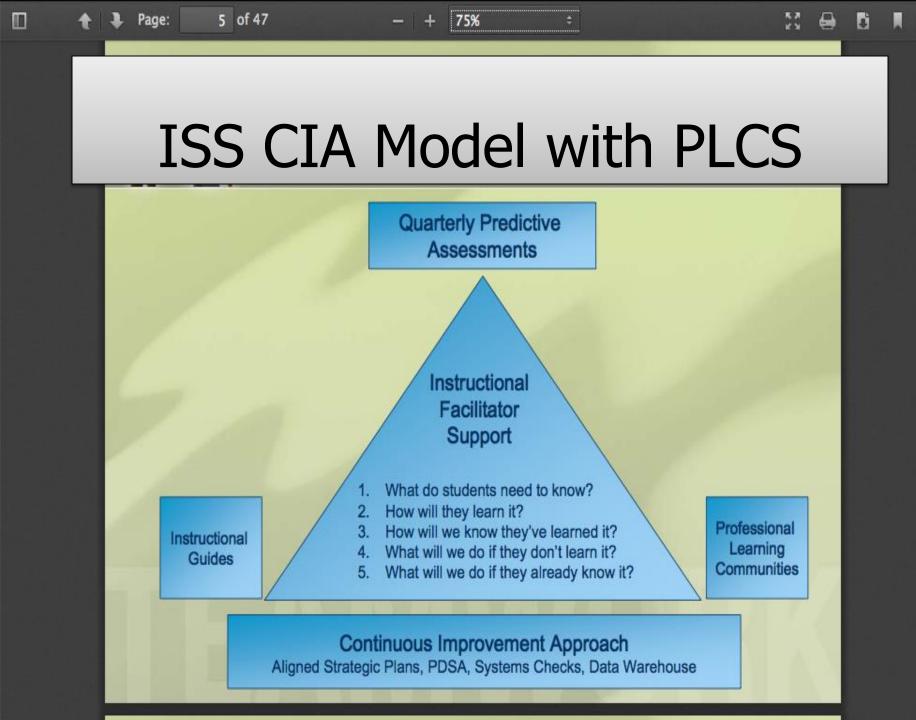
2018

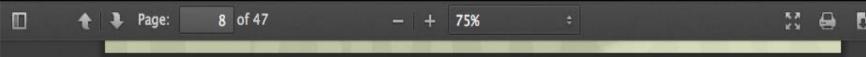
Incorporate recommendations into revised planning document. Begin accreditation self-study.











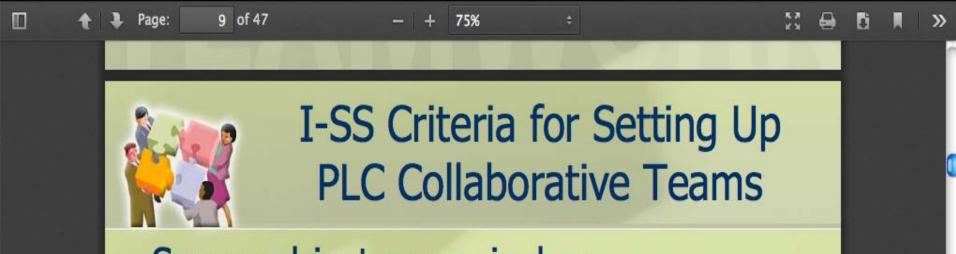


Rationale –

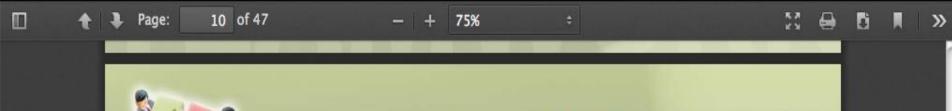
"Throughout our ten-year study, whenever we found an effective school or an effective department within a school, without exception that school or department was part of a collaborative professional learning community."

Milbrey McLaughlin

From Learning By Doing, Dufour, Dufour, Eaker, Many



- Same subject or curriculum
- Same grade (if they teach the same subject)
- Must meet together at one hour per week
- Clear parameters, priorities, and products that guide the work of the team toward the goal of improved student learning





Components of I-SS PLC Model

- Team norms
- Clearly defined essential learning targets
- Student performance baseline data
- Strategic SMART goals
- PLC mission statement
- Weekly collaborative team meetings
- 7. Focus on I-SS Teamwork Matrix requirements
- Use of PDSA as our continuous improvement process
- Tightly aligned professional development
- NSDC professional development format



I-SS Teamwork Matrix

Date/ Week	Action	Person Responsible	Product	Observed by or reported to
By Aug 22 Teacher Workday	Establish PLC teams with input from teachers (Std 1)	Principal	Team list	Quality Assurance Department
Prior to Week 1	Establish PLC team meeting schedules with input from teachers. (Std 1)	Principal	Team meeting schedule	Quality Assurance Department
By Aug. 29: End of week 1	Establish PLC team norms - utilize Learning By Doing (LBD) process and/or template. (Std 1,4)	PLC Chair	Team Norms	Leadership Team













Alignment Between Requirements and Professional Development

PLC requirement:	Aligned Professional Development:
Gap Analysis	Data Analysis Coaching Lee Jenkins' LtoJ
Best Practice Strategies	Marzano's High Yield Instructional Strategies Coil's Differentiation Strategies
Common Formative Assessment	Stiggins' Assessment FOR Learning
Focus on PDSA	Continuous Improvement







KnowledgeBase



Join Networks





LearnTake a Learning Path

BuildWith Design Tools

MY DESIGN KIT

My Networks

My Learning Paths

My Stuff

MY NETWORKS































WHAT'S HAPPENING?



Department Chair Update

April 24 in LEED Central

Department Chair Update



Morning all-- good news story fr...

April 24 in 2Rev Team

Hey there, Stuart and I spent ~6 hrs yesterday working with about ~50 educators from ~6 schools in



Rocks in a Jar

April 23 in 2Rev Team

Hi all -- You may have seen this or something similar, but I invite you all to watch this 1 minute video:

More

SHOW ME SOMETHING COOL

Harvard Business Rev<u>iew</u>♥





"Thinking like a designer can transform the way you develop products, servi...

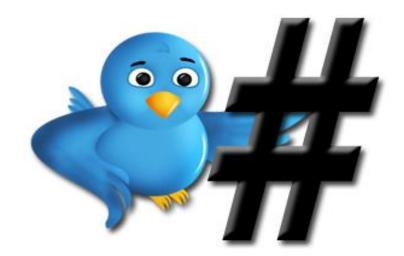


Change is What it Mean...

The Top PLNs with Meeting Times

#lrnchat

#gtchat



#pblchat

#edchat

#collegechat



Leadership 2.0 Web Walk

- INSPIRED and Edmodo
- 90 day cycle Google Ecology Example
- Fidelity rubric
- Design Tools



Evaluation

http://www.surveyshare.com/s/AYACCH
A