6 Edges of Innovation in Schools

CERA
Anaheim, December 3, 2015

Milton Chen, Ph.D., Senior Fellow
George Lucas Educational Foundation
San Francisco Bay Area
milton.chen@edutopia.org
George Lucas Interview
Creator of "Star Wars"

June 19, 1999
Washington, D.C.

A LIFE MAKING MOVIES

You had a bad auto accident as a teenager. Do you think that changed the course of your life?

George Lucas: I'm not sure. I think about that sometimes.
My Learning Journey
Longest Street in the World to a Galaxy
Long Ago & Far, Far Away
Service Learning: Growing Action From the Roots of Passion

By Jessica Cambell

In 2007, my co-teacher and I noticed that students felt increasingly like the world was "happening to them," as if they had no ability to affect positive change. This, coupled with the question "When am I going to use this?" led to the inspiration...
Edutopia's Schools That Work series profiles K-12 schools, districts, and programs that are dramatically improving the way students learn. Focusing on evidenced-based successes, we create how-to videos and actionable tips lists to help you transform your schools. We get close to the teachers, students, principals, and other administrators who have changed the future of their schools, and show you how they did it.

These educators also share their resources — rubrics, lesson plans, assessments, and training tools that will help you build your own successes.

And one more thing: We connect you with teachers and administrators from around the country who are collaborating to make similar changes in their own schools.
6 Edges of Innovation

Any Time, Any Place, Any Path, Any Pace

1. Thinking
2. Curriculum & Assessment
3. Technology
4. Time/Place
5. Co-Teaching, Co-Learning
6. Youth
America’s Strength: School/Community Partnerships

Blending formal and informal learning through schools, universities, museums, libraries, nonprofits, media, businesses, churches, youth groups, parks

A New Day for Learning: 24/7/365
Authentic Learning

School Life = Real Life
1. The Thinking Edge
The Whole Child
Howard Gardner’s Multiple Intelligences

1. Verbal
2. Logical/Mathematical
3. Visual
4. Musical
5. Bodily/Kinesthetic
6. Intrapersonal
7. Interpersonal
8. Naturalist
Multiple Intelligences Self Assessment

This quiz asks 24 questions and will take less than five minutes to complete. Try not to think too hard – just go with your first thought when describing your daily activities and interests. By the end, you may have some new insights into your learning preferences.

How much time do you spend:

<table>
<thead>
<tr>
<th>None</th>
<th>Only a little</th>
<th>A fair amount</th>
<th>A lot</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Getting lost in a good book.

Doing crafts or arts projects.
Music and Dance Drive Academic Achievement

Tucson elementary schools find success by infusing arts into every discipline. Read the article.

RELEASE DATE: 1/26/09
2. The Curriculum Edge
In This School, Class Is A Workshop And Experiments Are Mandatory

July 22, 2014  8:03 AM ET
KEVIN MCCORRY

Imagine a school where classes are organized not by subject but by project — a school created not by administrators, but by teachers fed up with the status quo. A school where kids from a city's toughest neighborhoods are given the opportunity to experiment and the freedom to fail.

In West Philadelphia, that school is a reality. It's called The Workshop School.
Why Project Based Learning (PBL)?

Project Based Learning’s time has come. The experience of thousands of teachers across all grade levels and subject areas, backed by research, confirms that PBL is an effective and enjoyable way to learn -- and develop deeper learning competencies required for success in college, career and civic life. Why are so many educators across the United States and around the world interested in this teaching method? The answer is a combination of timeless reasons and recent developments.

Featured PBL Content

- Are You Buying What I’m Vending
  Economics project by BIE Nat'l Faculty Matt Baer

- Top 10 Reasons Why Teaching Key Competencies with PBL is a Good Idea
  How PBL builds Key "4Cs" competencies

- BIE's Project Search
  These projects are meant to inspire your own ideas

- PBL Community on Google+
  Help create Gold Standard PBL

- 2015 Atlanta PBL Academies
  April 23 to 25, 2015 in Atlanta, Georgia
The DNA of Learning: Teens Tackle Animal Poaching Through Genetics

Eleventh-grade biotechnology students use DNA barcoding to help save endangered African wildlife. More to this story.

December 3, 2008

Related Tags: Assessment, Career and Technical Education, Service Learning, Dropout Prevention, Environmental Education, Field Trips, Global Education, 9-12 High School, Science
High School Education Takes On a Global Dimension

New doors open as students at Chicago’s Walter Payton College Prep learn an international perspective reinforced by four years of language study, global videoconferences, and travel abroad.

SEPTEMBER 25, 2007

RELATED TAGS: Integrated Studies, Global Education, 9-12 High School, Math, Science, World Languages
Social and Emotional Learning in Action

The Resolving Conflict Creatively Program helps develop emotional intelligence in Brooklyn inner-city fifth graders. More to this story.

FEBRUARY 21, 2001

RELATED TAGS: Social and Emotional Learning, Bullying Prevention, Mental Health, 3-5 Upper Elementary
3. The Technology Edge
Weapons of Mass Instruction!

Caption: SAN JOSE, CA - FEBRUARY 18: Fourth and fifth grade students at Rocketship SI Se Puede, a charter, public elementary school, use the internet and traditional classroom learning in one big open classroom, on February 18, 2014 in San Jose, California. Blended learning utilizes technology and online learning mixed with traditional, face-to-face instruction to give students more individualized teaching. Students can learn at their own pace. Teachers are freed up to help students who are behind as well as allow high achievers to go faster. (Photo by Melanie Stetson Freeman/The Christian Science Monitor via Getty Images)
TECHNOLOGIES THAT MAKE THE WORLD'S CULTURE ACCESSIBLE TO ANYONE, ANYWHERE.

FOR THE CULTURALLY CURIOUS

Discover artworks, collections and stories from all around the world in a new way. Explore cultural treasures in extraordinary detail and easily share with your friends.
Who are we?

Bugscope was created and is run by the Imaging Technology Group at the Beckman Institute at the University of Illinois, Urbana-Champaign. The Imaging Technology Group (ITG) is a collection of imaging specialists and microscopists who provide state-of-the-art imaging facilities to researchers on the University of Illinois campus. We also have entomology students from the University who frequently join our live sessions to provide extra information about the insects.

The Bugscope Team

Chas Conway's trajectory through the Bugscope program is unrivaled. He got his start with the program in 1999 as a sophomore from University High School. Then age 15, he quickly became the most capable member of the high school 'BugOps' team as he sputter coated insects, set up the ESEM, and chatted with the students. This experience led him to work for ITG during his summers in high school and college, where he trained graduate students many years his senior to...
In the early 1990s, a team of researchers decided to follow about 40 volunteer families — some poor, some middle class, some rich — during the first three years of their new children's lives. Every month, the researchers recorded an hour of sound from the families' homes. Later in the lab, the team listened back and painstakingly tallied up the total number of words spoken in each household.

What they found came to be known as the "word gap."

It turned out, by the age of 3, children born into low-income families heard roughly 30 million fewer words than children born into middle-class families.
The LENA System’s Key Components:

**The Digital Language Processor (DLP)**
The LENA Digital Language Processor (DLP) weighs just 2 ounces and captures up to 16 hours of audio. The DLP incorporates a powerful microprocessor with advanced compression and audio components similar to hearing aids costing over $1000.

**Specially designed children’s clothing with a pocket to hold the DLP**
The LENA DLP fits snugly and unobtrusively into a high-tech pouch hidden in the front chest pocket. The pouch is specifically designed for optimal acoustic quality and the child’s comfort. Choose from a wide array of fun and fashionable styles and colors.
Visualizing Data in My Sleep with Tableau by Robert Rouse. Robert shows how his sleep patterns changed after the birth of his child.
Quantifying Recess

(Lee & Drake, 2013)

Sunrise Session - Victor Lee: Engaging Bodies & Minds in K-12 Education
How Making Connects Students to Engineering and Tech

See how the Maker Movement can give students the tools (and a community) to help them take control over their own learning.

STUDENT ENGAGEMENT
Genius Hour and the 6 Essentials of Personalized Education

By Nichole Carter

Personalized education comes alive in a classroom when Genius Hour offers opportunities for students to work on original projects.
4. The Edge of Time/Place
5. Co-Teaching Edge
The Edible Schoolyard Yields Seed-to-Table Learning

This campus gardening project has done more than teach students about the fundamentals of organic gardening. It’s taught life lessons about interdependence, caring for the environment, and the value of hard work. Read the article.

MARCH 11, 2004

RELATED TAGS: Project-Based Learning, Environmental Education, Nutrition, Place-Based Learning, 6-8 Middle School, Science
Celebrating 100 Years of Service

On August 25, 2016, the National Park Service turns 100! The Centennial will kick off a second century of stewardship of America’s national parks and engaging communities through recreation, conservation, and historic preservation programs, and will celebrate achievements of the past 100 years.

Please join us and embrace the opportunities to explore, learn something, be inspired, or simply have fun in the 401 national parks. Follow us on Facebook and check back here to get involved.
Hey fourth graders! See America’s natural wonders and historic sites for free.

Let’s Go!

Every Kid in a Park
You and your family get free access to hundreds of national parks and sites for an entire year.
6. The Largest Edge: Youth
If you could design your own school and study whatever you wanted, what would you choose to learn?

This isn't a far-fetched question for students at Monument Mountain Regional High School, who are participating in a unique activity called the Independent Project. The program is essentially an "alternative" school within the Massachusetts public high school that's completely run by students -- no teachers, parents, or adults allowed -- and they're in charge of deciding their entire curriculum.
What’s your definition of a great school?

Make it short and *measurable*!
Do the children run in at the same rate they run out?