

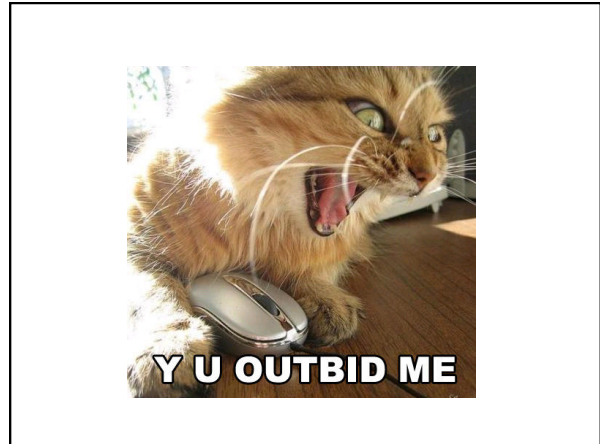
## Transforming Education



## Agenda


- Get to Know Each Other!
- Environmental Scan – Revolution!
- What Do Students Say?
- Strategies and Tools
- Discussion





### For Example...

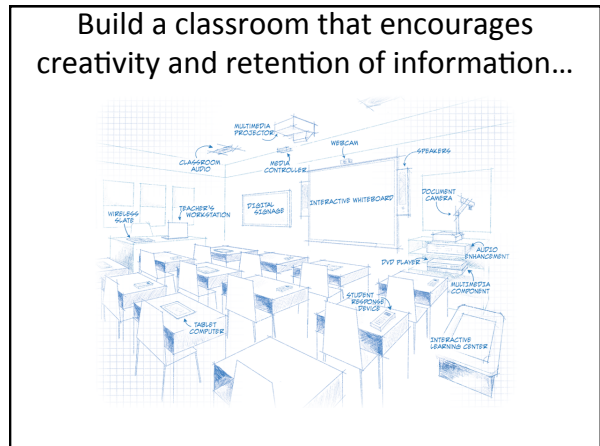
**The Montessori Method:**



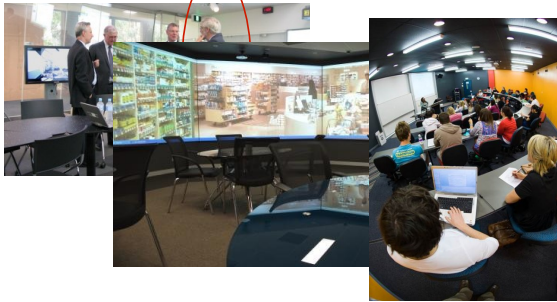
The Montessori Method is a popular approach that is designed to support and encourage the natural development of children in a prepared environment (Morison, 2009). There are five basic principles that are the foundation of the Montessori Method; Respect for the child, Absorbent mind, Sensitive periods, Prepared environment, and Auto education (Morison, 2009). This method encourages the teacher to guide the student not necessarily teach the student.

I would like you to watch this short video (2:30) that shares an administrator, teacher, parents and child's point of view of a specific Montessori school. You will find that all mention the many principles associated with this method.

(Please copy and paste the teachertube.com website into your browser.)  
[http://www1.teachertube.com/view/Video.php?title=North\\_Shoreview\\_Pre\\_K\\_8\\_Montessori\\_Music\\_amp\\_Art&video\\_id=193018&vkey=](http://www1.teachertube.com/view/Video.php?title=North_Shoreview_Pre_K_8_Montessori_Music_amp_Art&video_id=193018&vkey=)



### Monash University: Learning Spaces



### Save \$MILLIONS



### Crazy Talk and Student Presentations




### Revolution

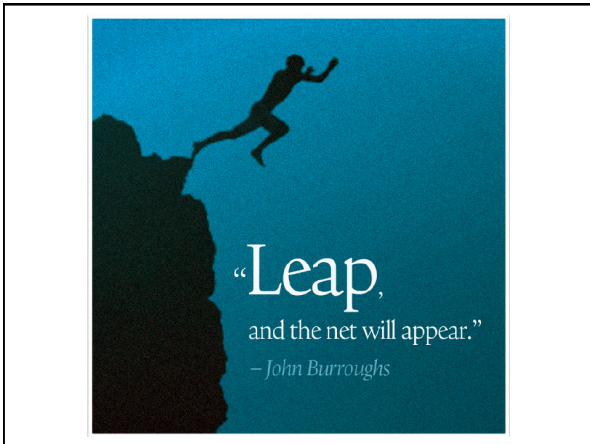
# 1



Higher education (and education generally) now faces the first great technological revolution in five centuries....



Eric Ashby  
The Master  
Clare College  
Cambridge



### National Trends

- Higher Education
- K-12



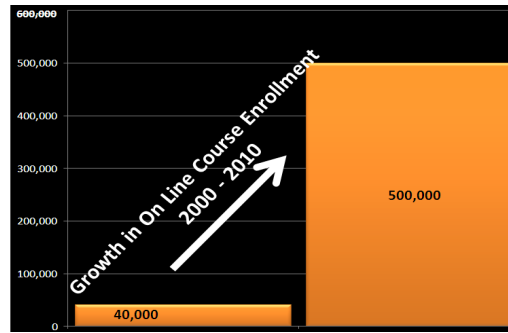
The Horizon Report cover features a woman's face in profile, with the text "HORIZON REPORT" and "2015-2016 Edition" at the top, and "The World Economic Forum" at the bottom.



### Higher Education



### K-12 Online



### Who are our future students?



St. Peter's Square





From Lone Professor...



To Lone Professor...





**KAPLAN** K-12 LEARNING SERVICES

**BYU Independent Study**

**National University**

### Competition

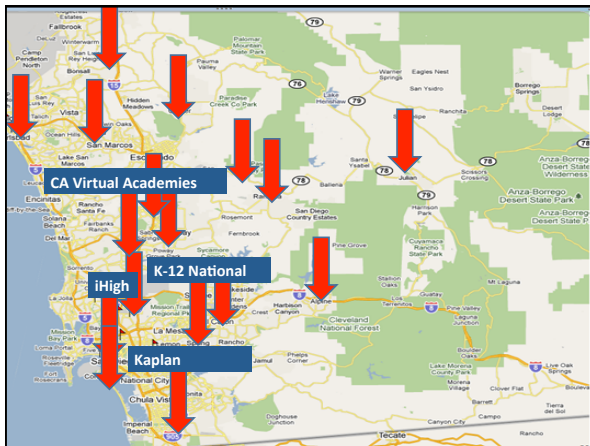
- K-12 online learning and virtual schools are expanding rapidly.
- 300 million market for K-12 online learning
- Estimated to be growing by 30% annually.



**CONNECTIONS ACADEMY**

**iNACOL**  
International Association for K-12 Online Learning

**K12**



### What companies have failed to anticipate customer expectations?



**Bridgepoint**



### Customers... and the importance of anticipation

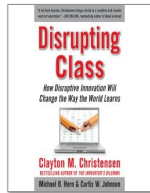


“He skates to where the puck is going to be...”

Walter Gretzky



### Disruptive Innovation

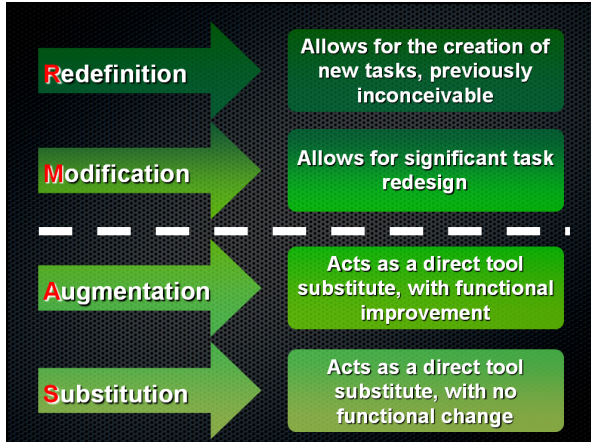


“Although computer-based learning is in its infancy, classes that follow this approach possess certain technological and economic advantages over the traditional school model that should allow them to grow and improve rapidly.” - Christensen



Charles **Darwin** quote: “It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to **change**”





### ASU Math Redesign Comparison Old Classroom Environment

Student engagement was weak.

Instructors lecture.

Student attendance was poor.

### ASU Math Redesign Comparison New Lab Environment

Students are engaged.

Instructors answer individual questions.

Student attendance is strong.

Reasoning Mind

Think Through Math (TTM)

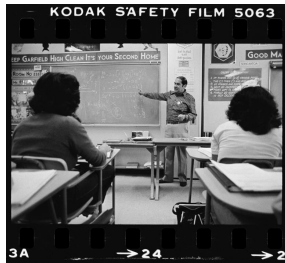
LearnSmart™

ALEKS®

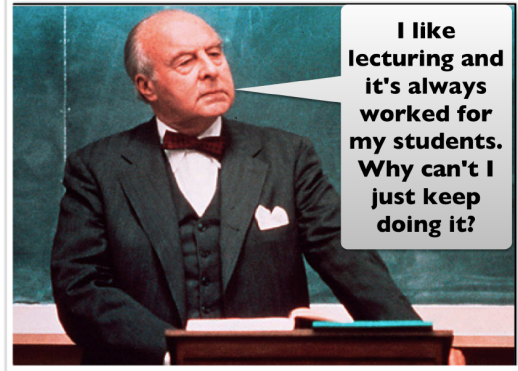
MyMathLab

KNEWTON

## The Power of an Instructor!



<https://www.youtube.com/watch?v=IM6blsMhPRQ&feature=related>



Graph this system of equations and solve.

$$3x + 10y = 50$$
$$-6x - 10y = -10$$


Click and drag the points to move the lines.

- Answer...
- I don't know...
- A hint?...
- A video tutorial?...
- ask for help?...

## Denver School Eliminates Grade Levels

**No More One-Size-Fits-All**

Dec 24, 2008 [Barbara Patel](#) Tweet 0 Like



*Next year, Westminster will try something that has never been tried in the Lower 48 states-no grade levels. The curriculum will be totally driven by state standards.*

Next fall, students at Metz School will enter school and set the pace for their own learning. Working at your own level of proficiency is not a new concept. Students on IEPs, Individual Education Plans, work at a personalized mastery level in the resource room. Metz School will allow each child to set their own pace in math, writing and reading.

**Personalized Education Is Becoming a Reality - able2book.com**

**Students In Charge**

### Ability Grouping

**Flexible Ability Grouping**

Instruction methods at American Academy focus on the idea that not all students start at the same level, learn in the same way, or master skills at the same pace. Flexible ability grouping is used to address the needs of all students, and to challenge them to stretch their abilities and master new skills.

Every student at American Academy is assessed in several subjects throughout the school year including mathematics, reading, writing, and science. The students are divided into groups based on mastery of skills, academic ability, learning style and other factors. Each group is challenged with concepts and skills appropriate to their readiness level. Each and every group raises the bar for kids, requiring them to stretch themselves to meet expectations. Continuing assessments throughout the year are used to validate or adjust placement.

**Reading Group Placement**

Reading group placement for grades K-4 is determined using data, including the Measure of Academic Progress (MAP) Reading and Language Usage assessments, and READ Act assessments. In 5th grade and up, students attend English (Reading and Language Arts), History, and Science with their ability group, so placement is determined based on MAP Reading, Language Usage, and Science. Math MAP scores are considered for 8th grade due to the math component in Physics. As the year goes on, we continue to evaluate placement and will make adjustments at trimester changes as needed.

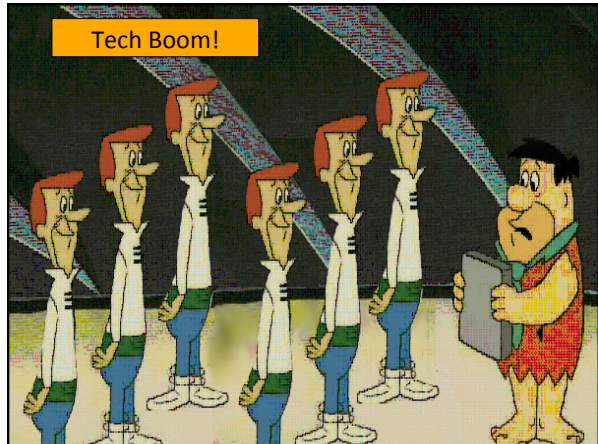
**Reading Group Definitions**

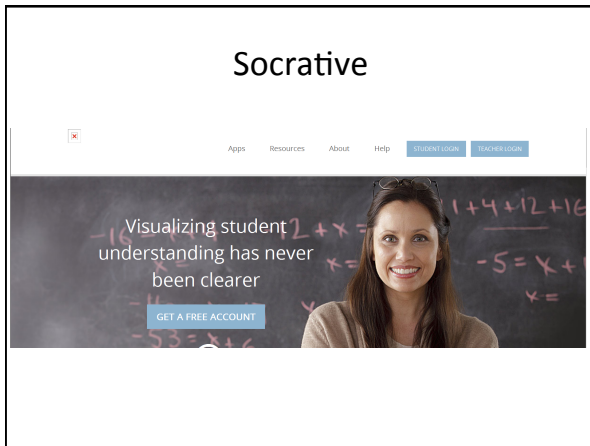
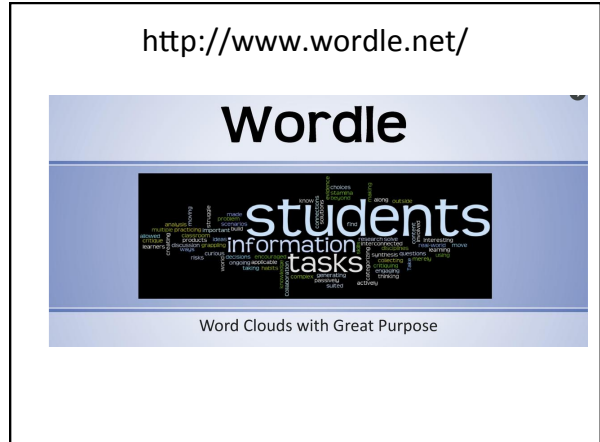
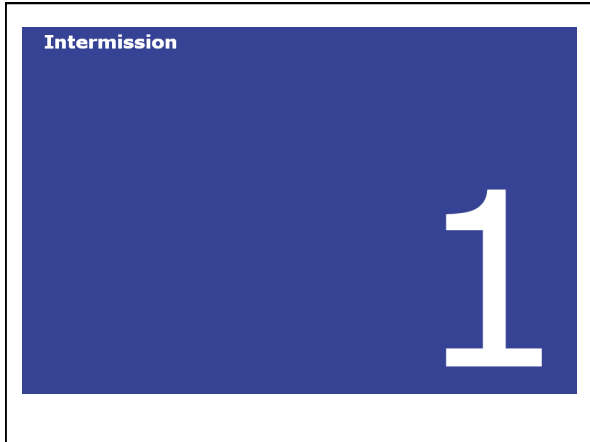
- **Intervention:** Small group instruction to students performing below grade level or to students who would benefit from increased direct instruction. Necessary interventions to achieve proficiency will be provided.
- **Supported:** Specialized group instruction to students performing at grade level with increased direct instruction to ensure appropriate challenge and growth.
- **Standard:** Conventional group instruction to solidly performing students (at or above grade-level) with appropriate challenge to ensure continued growth.
- **Advanced Standard:** Advanced instruction to high performing students with increased rigor and depth of knowledge expectations.
- **Accelerated:** Accelerated instruction to high performing students with appropriate challenge and rigor. Applies to 5th grade and higher.

## This is happening...

**Flexible Grouping and Acceleration**

- Challenges each child at their own level
- Students assessed early and often for placement
- Groups to support all kids:
  - Intervention      - Standard Advanced
  - Supported        - Accelerated
  - Standard





<https://poway.instructure.com/courses/2062/pages/bookcreator>



<https://www.newsela.com/>

A screenshot of the Newsela website. At the top, it says "Newsela provides excellent current news articles on multiple subjects. Each article is available in multiple Lexile ranges." Below this is a main article titled "As extremists use instant-messaging apps, FBI wants to crack the code" with a video player. To the right, there are two smaller article thumbnails: "Reading, writing can be a prescription for healing, doctors are finding" and "Disney defends character anonymity policy to preserve park fantasy".

<http://www.scoop.it/>

A screenshot of the Scoop.it website. At the top, it says "Join Free". Below is a section titled "How it works?" with three steps: 1. "Find something awesome." (Discover incredible content through smart searches and the Scoop.it community), 2. "Make it yours." (Scoop what matters to you and add your fresh perspective), and 3. "Show it off." (Click publish to your social networks, blog, and a Google-friendly splash page). At the bottom, it says "Learn more about our solutions in Resources" and "Join Free".

Improvement in Post Secondary Education will require converting teaching from a 'solo sport' to a community based research activity



Herbert Simon  
Nobel Laureate



## What do we mean by efficacy?

**A measurable impact on improving someone's life through learning**



"The elements of learning can be mapped out, the variables isolated and a measurable impact on learning predicted and delivered. This can be done at every level – a single lesson, a single individual, a classroom, an institution or a whole system."  
- John Fallon

## Mastery Learning Model MyMathLab

### Large, measureable impact

*\*Success Case: Learning Gains in College Algebra in 3 months*

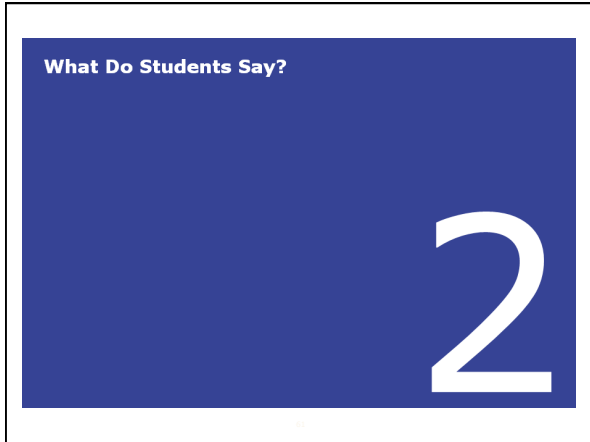
- \*Curriculum Consulting Services
- \*Training Services
- \*MyMathLab + Mastery Learning Model

Final Exam Scores	Average	Median
Before Efficacy Engagement	52%	53%
After Efficacy Engagement	71%	76%
Gain	19%	23%

Weekly Learning Gains	Week 1	Week 2	Week 3	Week 4	Week 5
Average					
Pre-Test	50%	59%	66%	67%	71%
Post-Test	69%	74%	78%	82%	84%
Gain	19%	15%	12%	15%	13%

"In the past, time is the constant and achievement is the variable; Achievement should be the constant and time the variable."  
~ Florida Virtual Schools





### Jing and Video Feedback

- <http://www.screencast.com/users/andyshean/folders/jing/media/fb7298fa-c78b-428f-974e-15d63c28fccf>

### StoryBird

- [http://storybird.com/books/a-life-in-stages/?utm\\_source=storybird&utm\\_medium=email&utm\\_campaign=share-book](http://storybird.com/books/a-life-in-stages/?utm_source=storybird&utm_medium=email&utm_campaign=share-book)

[http://www.readwritethink.org/files/resources/interactives/cube\\_creator/](http://www.readwritethink.org/files/resources/interactives/cube_creator/)

### CUBE CREATOR

Enter your name:

Then select which type of cube you would like to make by clicking one of the cubes below.

<b>BIO CUBE</b>  Use after reading or before writing a biography or autobiography Planning Sheet	<b>MYSTERY CUBE</b>  Use after reading or before writing a mystery story Planning Sheet	<b>STORY CUBE</b>  Use to map out the key elements of a story Planning Sheet	<b>CREATE-YOUR-OWN CUBE</b>  Fill in your own questions and responses to a topic Planning Sheet
---	--	---	--



**25, 757  
California  
Students**

*Result:*




A new uniquely “student vision” for leveraging emerging technologies to drive achievement and educational productivity

© Project Tomorrow 2010

**Creating Our Future:  
Students Speak Up about their  
Vision for 21st Century Learning**

**Three Essential Elements:**

- Social–based learning
- Un–tethered learning
- Digitally–rich learning



© Project Tomorrow 2010

**Social Based Learning**





## Social Based Learning

*“Through others we become ourselves.”*

*Lev Vygotsky*



## Un-tethered Learning



## OER

- <http://www.goedonline.com/101-websites-for-elementary-teachers>
- <http://www.ala.org/aasl/standards-guidelines/best-websites/2013#curriculum>
- <https://www.diigo.com/>

## Digitally-Rich Education



A screenshot of the James Taylor official website. The header includes the name "james taylor" and "OFFICIAL SITE" with navigation links for News, Schedule, Discography, Biography, Free Guitar Lessons, and Video Gallery. The main content area features a "free guitar lessons" section with a video player showing a man playing guitar. Below the video are social media links and a "send james an email" button. A "join the mailing list" button is also present. A small inset video shows a man speaking.

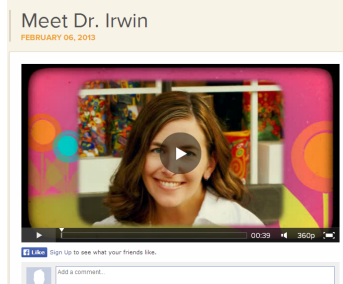
A screenshot of a video player showing a guitar lesson. The video title is "Lesson 7: 'SECRET OF LIFE' - Official James Taylor Guitar Lessons". The video shows a man in a white shirt and cap playing an acoustic guitar. A close-up inset shows his hands on the fretboard. The video player interface includes a play button, a progress bar at 1:01, and a duration of 9:28.

## Digital Tools

3



## Animoto



- [http://animoto.com/p/ajav/STpqo8fYqafhnaEMtjFiw?utm\\_source=next.college.com&utm\\_medium=player&utm\\_campaign=player](http://animoto.com/p/ajav/STpqo8fYqafhnaEMtjFiw?utm_source=next.college.com&utm_medium=player&utm_campaign=player)

## Voice Thread

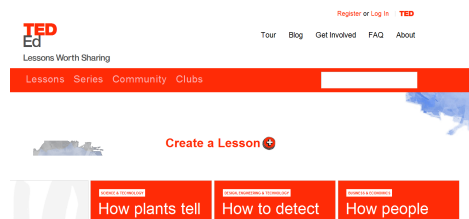


## Prezi

- [http://prezi.com/vckwlpfaqgkp/present/?follow=oqwk96lokuim&auth\\_key=138099a](http://prezi.com/vckwlpfaqgkp/present/?follow=oqwk96lokuim&auth_key=138099a)



## TedEd



**Wix**

**Shelby D. Lane**  
The Real Me Project

HOME | CONTACT | PHOTOS



## Hello, a bit about me:

Gender
Social Connections
Training

Safety
Formal Operations

The Real Me Project forced me to not only think about myself on another level, but it helped me by connecting me. It pushed me to think about the past and consider many of the decisions that I've made throughout my life, as well as why I made them at the time. It decided to make a thing because I had never explored before, and well, there is a first time for everything.

• <http://shelbydl.wix.com/the-real-me>

<https://evernote.com/>

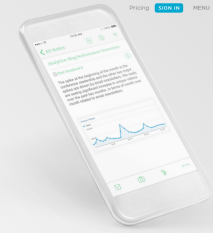
EVERNOTE BASIC PLUS PREMIUM Pricing [Sign Up](#) MENU

## Evernote Basic

### Start here. Start now.

Let Evernote change the way you organize your work. Just dive in: take notes, track tasks, and save things you find online. We'll sync everything between your phone and computer automatically.

SIGN UP
Free



**FEATURES OF EVERNOTE BASIC**

- Clip from anywhere on the web
- Share and discuss in Evernote
- Sync across phones and computers

