



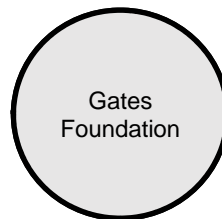
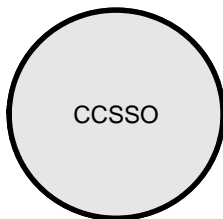
**International Center for  
Leadership in Education**

## **Educating for the Future: It Can Be Done!**

**Bill Daggett**  
Founder and Chairman  
November 2, 2017



## **National Most Rapidly Improving Schools Study**



## Ongoing Research

1. High Poverty/High Performance

## Ongoing Research

1. High Poverty/High Performance
2. Good to Great

# National Innovation Study



# Culture Trumps Strategy

**STANDARDS**

**TESTS**

**TEACHER EVALUATIONS**

# Future?

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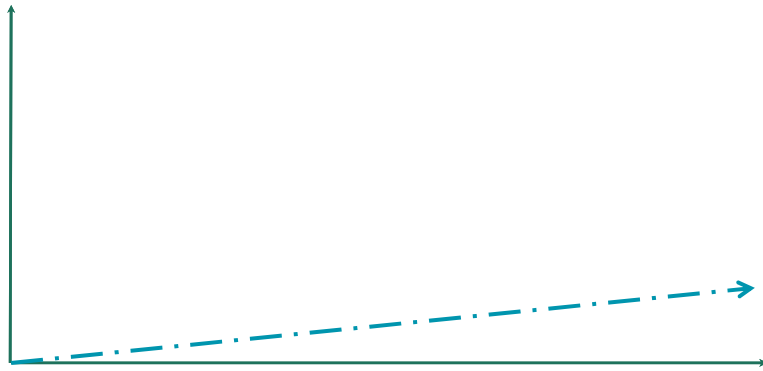
**STANDARDS**

**TESTS**

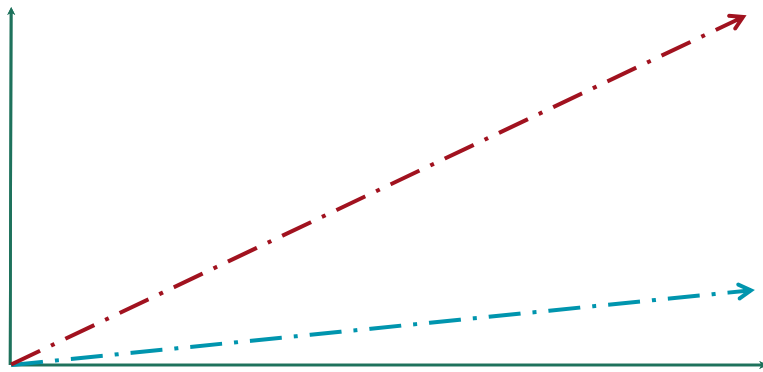
**TEACHER EVALUATIONS**

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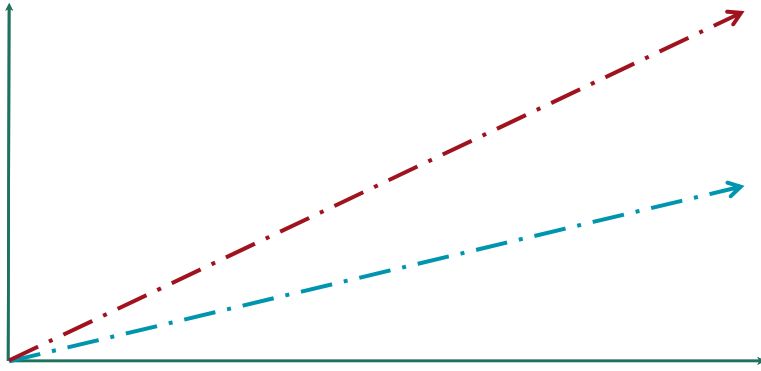
## Rate of Change



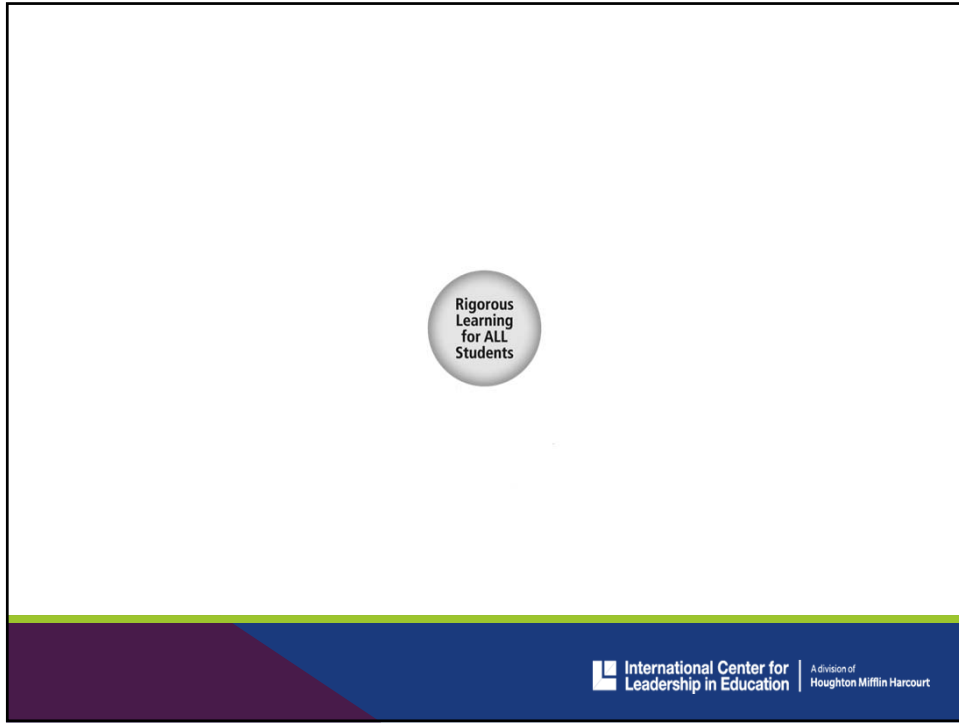
## Rate of Change



## Rate of Change



# Systemwide



Rigorous Learning for ALL Students

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This slide features a central grey circle containing the text "Rigorous Learning for ALL Students". The bottom of the slide has a decorative footer with a purple and blue gradient background and the logo for the International Center for Leadership in Education, a division of Houghton Mifflin Harcourt.



Instructional Effectiveness

Rigorous Learning for ALL Students

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This slide features a central circular graphic. The outer ring of the circle is dark grey and contains the text "Instructional Effectiveness" in a light grey font. Inside this ring is a smaller white circle containing the text "Rigorous Learning for ALL Students" in a dark grey font. The bottom of the slide has a decorative footer with a purple and blue gradient background and the logo for the International Center for Leadership in Education, a division of Houghton Mifflin Harcourt.

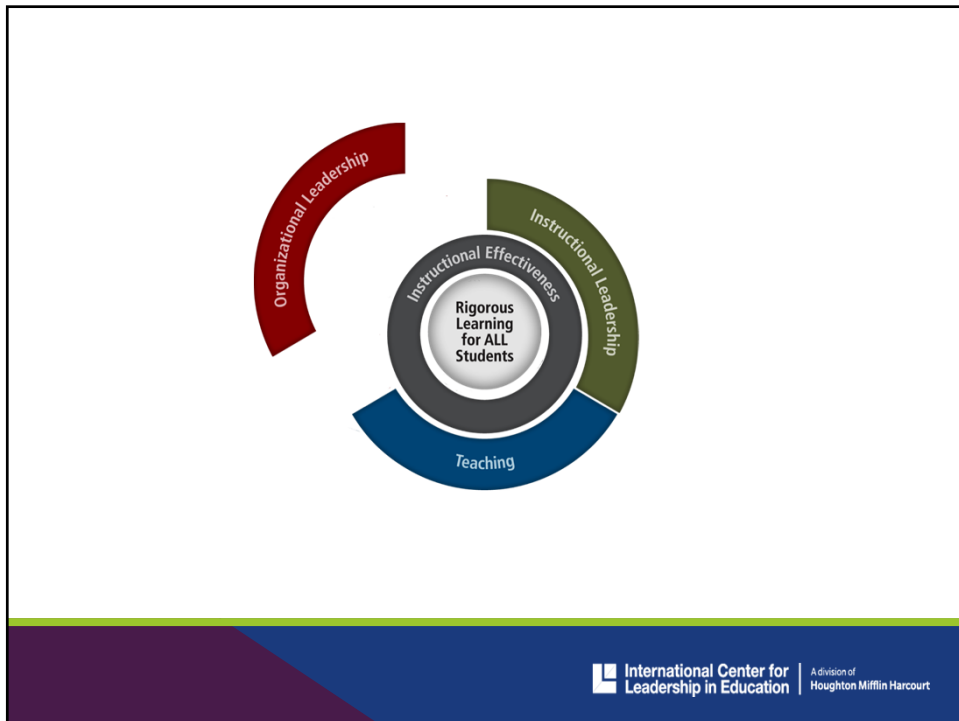
A circular diagram with a central white circle containing the text "Rigorous Learning for ALL Students". This central circle is surrounded by a grey ring with the text "Instructional Effectiveness" written along its top arc. Below the grey ring is a blue arc with the text "Teaching" written below it.

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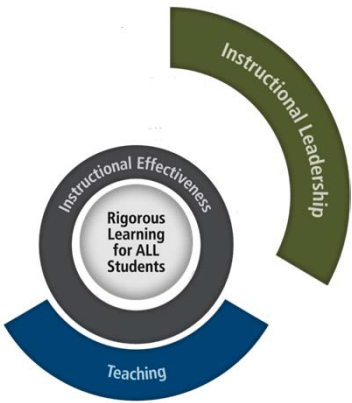
A circular diagram with a central white circle containing the text "Rigorous Learning for ALL Students". This central circle is surrounded by a grey ring with the text "Instructional Effectiveness" written along its top arc. To the right of the grey ring is a green arc with the text "Instructional Leadership" written along its top arc. Below the grey ring is a blue arc with the text "Teaching" written below it.

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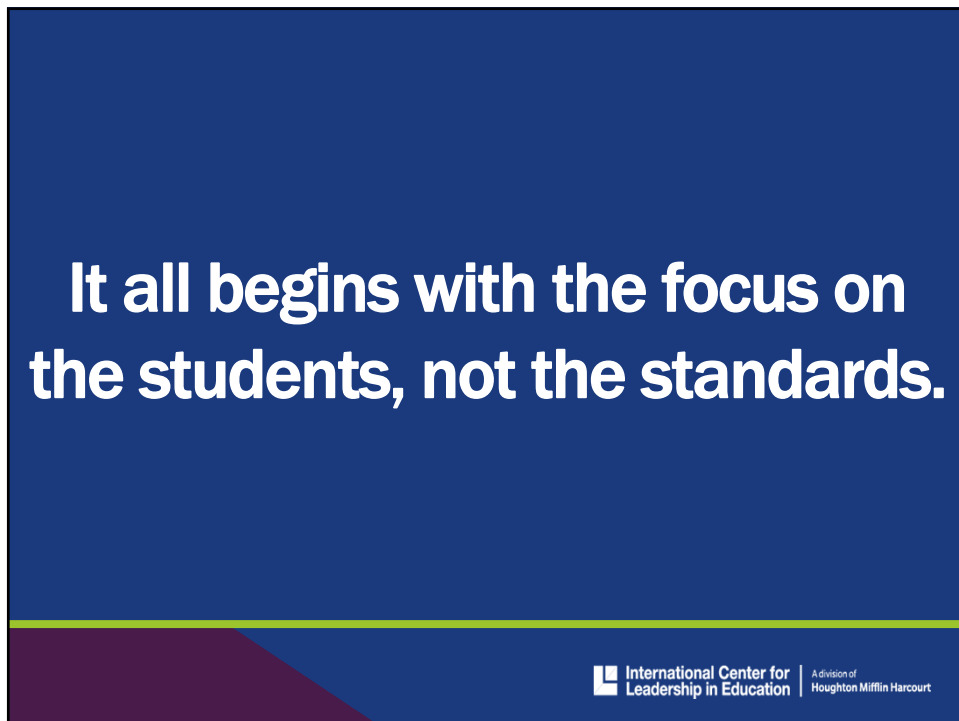


# Budgeting




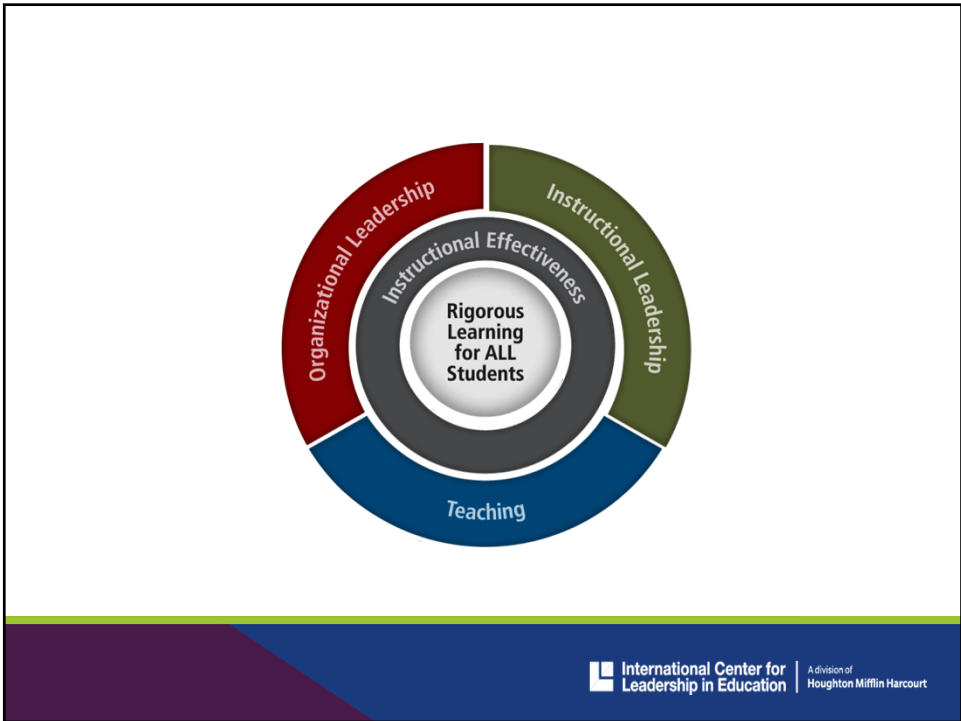
# Growth vs Proficiency

# Technology



# Social and Emotional Development

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# WHY

# WHY – WHAT

# WHY – WHAT - HOW

# WHY

# Culture Trumps Strategy

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## The Winds of Change



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# 1<sup>st</sup> Industrial Revolution

# 1<sup>st</sup> Industrial Revolution 2<sup>nd</sup> Industrial Revolution

# Industrial Revolution transformed both the expectations and model of public education

#

**1<sup>st</sup> Industrial Revolution**  
**2<sup>nd</sup> Industrial Revolution**  
**3<sup>rd</sup> Industrial Revolution**

# iPhone

# Web 1.0 - Informational Web

**Web 1.0 - Informational Web**  
**Web 2.0 - Relational Web**

**Web 1.0 - Informational Web**  
**Web 2.0 - Relational Web**  
**Web 3.0 - Anticipatory Web**

# Deep Learning

## Deep Learning

- Everything that is analog is being digitized
- Everything that is being digitized is now being stored
- Everything that is stored is being analyzed by software

# **“Harvard Yanks Acceptance Letters Over Offensive Facebook Posts”**

-Fortune

Source: Fortune, June 5, 2017

# **“Colleges Eyeing Social Media—Big Time”**

-South Coast Today

Source: Fortune, June 5, 2017

**“They Loved Your G.P.A.  
Then They Saw Your  
Tweets.”**

-The New York Times

Source: Fortune, June 5, 2017

**“One in Ten Young People  
Have Been Rejected For  
Jobs Because of Their Social  
Media History”**

-Business Insider

Source: Fortune, June 5, 2017

## 5 Largest Companies

### 2007

1. Exxon Mobil (\$540B)
2. General Electric (\$463B)
3. Microsoft (\$355B)
4. Citigroup (\$331B)
5. Bank of America (\$290B)

### 2017

1. Apple (\$794B)
2. Google (\$593B)
3. Microsoft (\$506B)
4. Amazon (\$429B)
5. Facebook (\$414B)

Source: S & P Dow Jones Indices

# Schools...



**1<sup>st</sup> Industrial Revolution**  
**2<sup>nd</sup> Industrial Revolution**  
**3<sup>rd</sup> Industrial Revolution**  
**4<sup>th</sup> Industrial Revolution**

**4<sup>th</sup> Industrial Revolution**

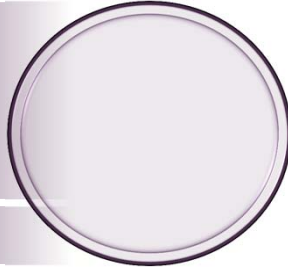
**3<sup>rd</sup> Revolution**

## 4<sup>th</sup> Industrial Revolution

### PHYSICAL

Nanotech

- 1/100<sup>th</sup>
- 10 times
- Jell-O



3<sup>rd</sup> Revolution



# Driverless Cars

# Truck Drivers

## G.E. Schenectady R.D. Center

- Engine Part

## G.E. Schenectady R.D. Center

- Engine Part



1. Concept

## G.E. Schenectady R.D. Center

### ■ Engine Part



1. Concept
2. Design Team

## G.E. Schenectady R.D. Center

### ■ Engine Part



1. Concept
2. Design Team
3. Build Machine Tool

## G.E. Schenectady R.D. Center

### ■ Engine Part



1. Concept
2. Design Team
3. Build Machine Tool
4. Build Prototype

## G.E. Schenectady R.D. Center

### ■ Engine Part



1. Concept
2. Design Team
3. Build Machine Tool
4. Build Prototype
5. Test

## G.E. Schenectady R.D. Center

- Engine Part



2 years

1. Concept
2. Design Team
3. Build Machine Tool
4. Build Prototype
5. Test

## G.E. Schenectady R.D. Center

- Engine Part

- 2 Years

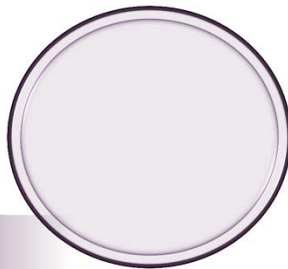
- **Now**
  - 3-D computer-aided software
  - 3-D printer using steel chips

## G.E. Schenectady R.D. Center

- Engine Part
- 2 Years
- **Now**
  - 3-D computer-aided software
  - 3-D printer using steel chips

*From 2 years to 2 days*

## 4<sup>th</sup> Industrial Revolution



3<sup>rd</sup> Revolution

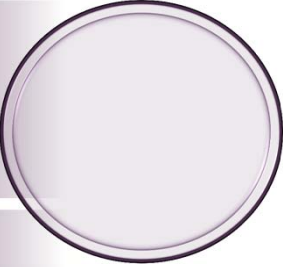


# 4<sup>th</sup> Industrial Revolution

**PHYSICAL**  
Nanotech

- 1/100<sup>th</sup>
- 10 times
- Jell-O

3<sup>rd</sup> Revolution



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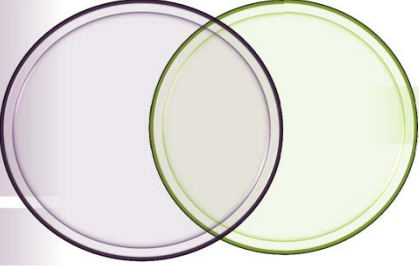
# 4<sup>th</sup> Industrial Revolution

**PHYSICAL**  
Nanotech

- 1/100<sup>th</sup>
- 10 times
- Jell-O

3<sup>rd</sup> Revolution

**BIOLOGICAL**



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## 4<sup>th</sup> Industrial Revolution

**PHYSICAL**  
Nanotech  
■ 1/100<sup>th</sup>  
■ 10 times  
■ Jell-O

3<sup>rd</sup> Revolution

**BIOLOGICAL**  
Biotech

The diagram features two overlapping circles. The left circle is purple and labeled 'PHYSICAL' with 'Nanotech' and a list of items: '1/100<sup>th</sup>', '10 times', and 'Jell-O'. Below this circle is a purple bar labeled '3<sup>rd</sup> Revolution'. The right circle is green and labeled 'BIOLOGICAL' with 'Biotech' below it. The intersection of the two circles is shaded in a darker purple. The entire slide has a dark blue footer with the logo for 'International Center for Leadership in Education' and 'A division of Houghton Mifflin Harcourt'.

## 4<sup>th</sup> Industrial Revolution

**PHYSICAL**  
Nanotech  
■ 1/100<sup>th</sup>  
■ 10 times  
■ Jell-O

3<sup>rd</sup> Revolution

**BIOLOGICAL**  
Biotech

**DIGITAL**

The diagram features three overlapping circles. The top-left circle is purple and labeled 'PHYSICAL' with 'Nanotech' and a list of items: '1/100<sup>th</sup>', '10 times', and 'Jell-O'. Below this circle is a purple bar labeled '3<sup>rd</sup> Revolution'. The top-right circle is green and labeled 'BIOLOGICAL' with 'Biotech' below it. The bottom circle is blue and labeled 'DIGITAL'. The intersections of all three circles are shaded in a darker purple. The entire slide has a dark blue footer with the logo for 'International Center for Leadership in Education' and 'A division of Houghton Mifflin Harcourt'.

# Health Care

**If you can write an  
algorithm for a task,  
the job is gone.**

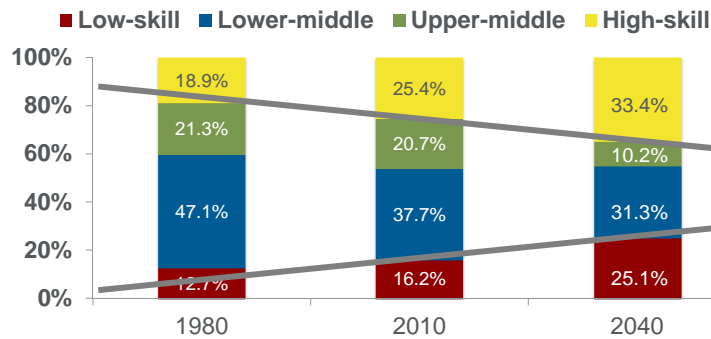
# Employment

People use to be paid for what they knew:

- Accountants
- Lawyers
- Economist

Not so in the future....

# Job Shares by Skill Group 1980 - 2040



Source: NY Fed Calculations, U.S. Census Bureau

## 5 Largest Companies

<u>2007</u>	<u>2017</u>	<u>2027</u>
1. Exxon Mobil	1. Apple	Bio/Nano/Info Technology
2. General Electric	2. Google	
3. Microsoft	3. Microsoft	
4. Citigroup	4. Amazon	
5. Bank of America	5. Facebook	

Source: S & P Dow Jones Indices


The rate of change caused by technology is faster than larger organizations can adapt to.



Entrepreneurs are more effective in this changing environment than large/bureaucratic organizations

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**Work to Worker**

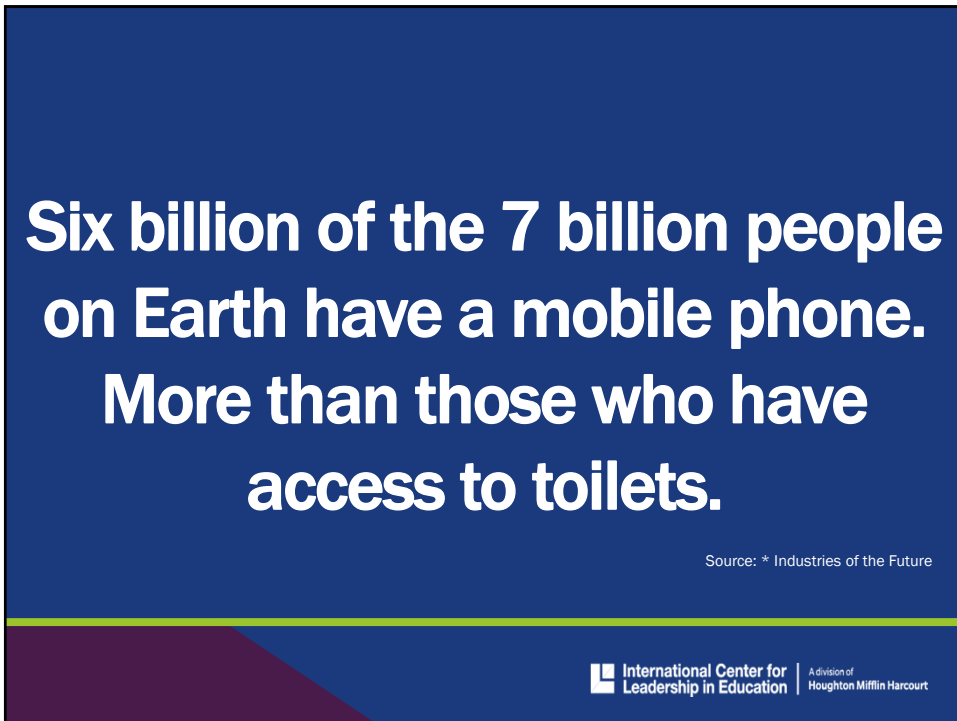
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**Six billion of the 7 billion people on Earth have a mobile phone. More than those who have access to toilets.**

Source: \* Industries of the Future





**Developing nations do not  
need to be freed from the  
structures of the past.**

**Schools....**

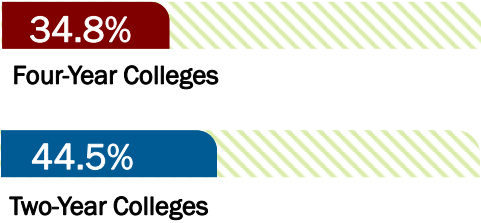
## The Winds of Change



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## College Dropout Rate 2016

### First to Second Year



College Type	Dropout Rate
Four-Year Colleges	34.8%
Two-Year Colleges	44.5%

Source: <http://www.air.org/sites/default/files/downloads/report/AIR-CALDER-Understanding-the-College-Dropout-Population-Jan14.pdf>

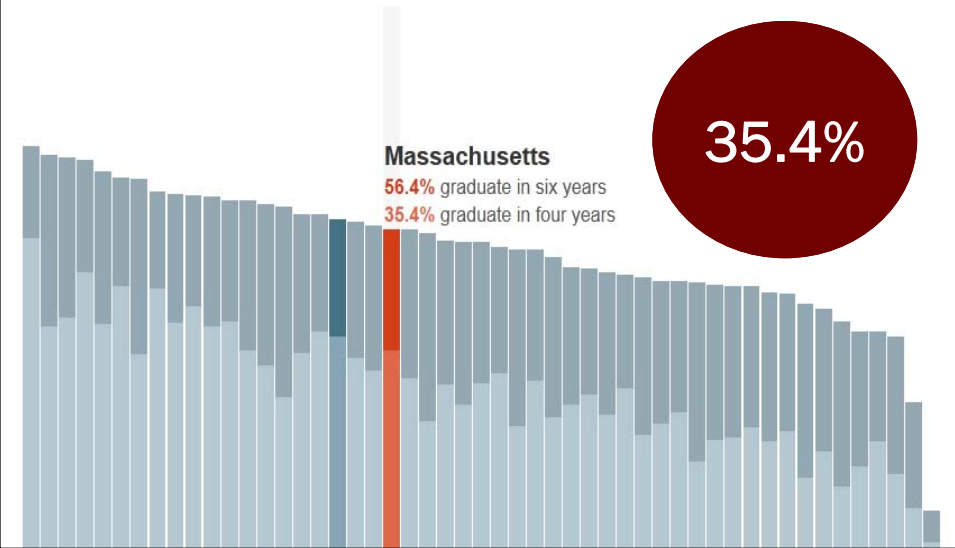
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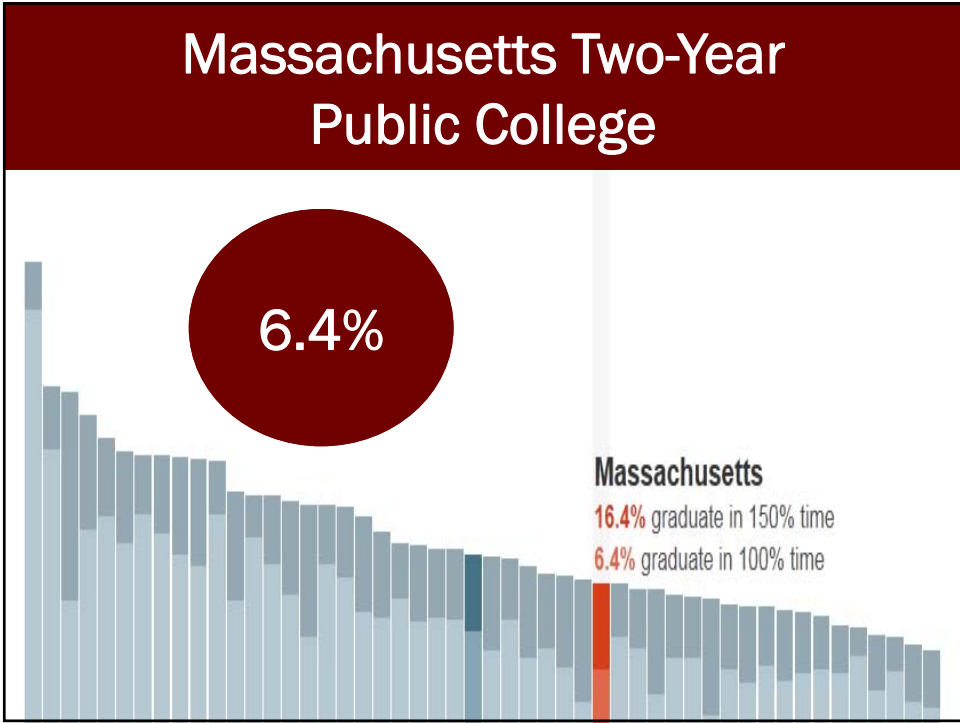
## Average Graduation Rate 2016 1983 - 2016



Source: <http://www.air.org/sites/default/files/downloads/report/AIR-CALDER-Understanding-the-College-Dropout-Population-Jan14.pdf>

## Massachusetts Four-Year Public College





## Your Major Matters A LOT

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The slide features a dark blue background with a white title 'Your Major Matters A LOT' centered in the middle. At the bottom, there is a horizontal line in a light green color. Below this line, the logo for the International Center for Leadership in Education is displayed on the left, and the text 'A Division of Houghton Mifflin Harcourt' is on the right.

## 2-Year College Graduates

OCCUPATION	STARTING	AVERAGE
Management Info Systems	\$45,100	\$72,100
Electrical and Chemical Engineers	\$45,100	\$69,800
Occ. Health and Safety	\$50,300	\$68,200
Diagnostic Medical Specialist	\$50,200	\$66,800
Computer Programmer	\$42,300	\$65,300

Payscale.com

## 4-Year College Graduates

OCCUPATION	STARTING	AVERAGE
Human Development	\$35,900	\$48,000
Athletic Trainer	\$34,800	\$46,900
Social Worker	\$33,000	\$46,600
Recreation and Leisure	\$32,200	\$45,300
Child and Family Studies	\$30,300	\$37,200

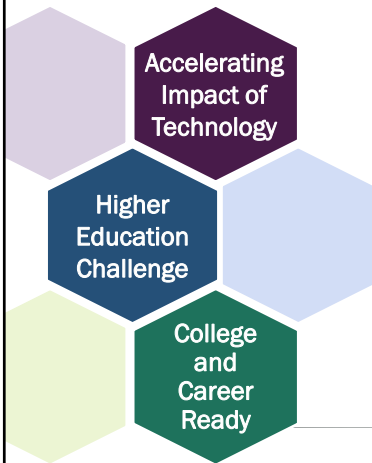
Payscale.com

## 4-Year College Graduates

OCCUPATION	STARTING	AVERAGE
Petroleum Engineer	\$103,000	\$160,000
Actuarial Math	\$58,700	\$120,000
Nuclear Engineer	\$67,600	\$117,000
Chemical Engineer	\$68,200	\$117,000
Aerospace Engineer	\$62,800	\$109,000


PayScale.com

## The Winds of Change



**1. Complex Problem Solving**

## Top 10 Skills




Source: Future of Jobs Report, World Economic Forum

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**1. Complex Problem Solving**

**2. Critical Thinking**

## Top 10 Skills




Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity



Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management



Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others



Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence



Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Active Listening

Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Active Listening
8. Service Orientation

Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Active Listening
8. Service Orientation
9. Negotiation

Source: Future of Jobs Report, World Economic Forum

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### Top 10 Skills

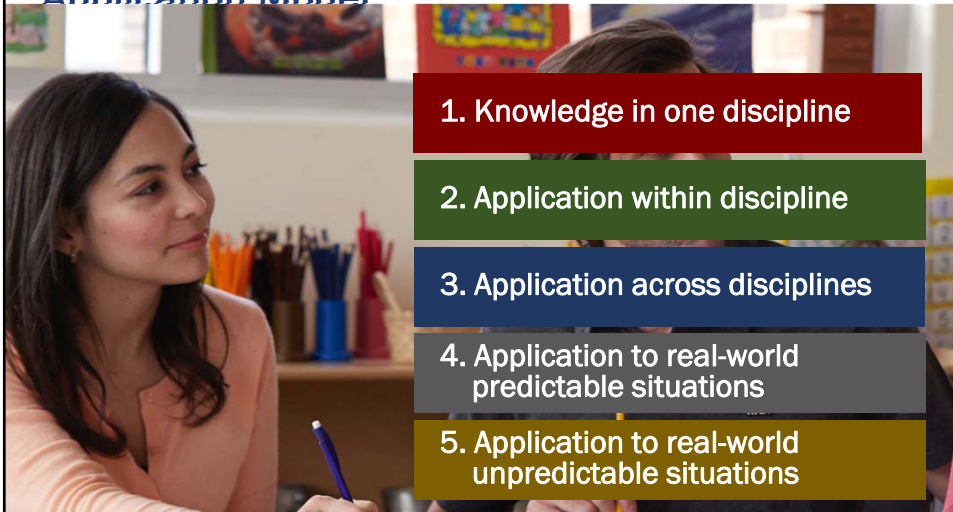
1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Active Listening
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

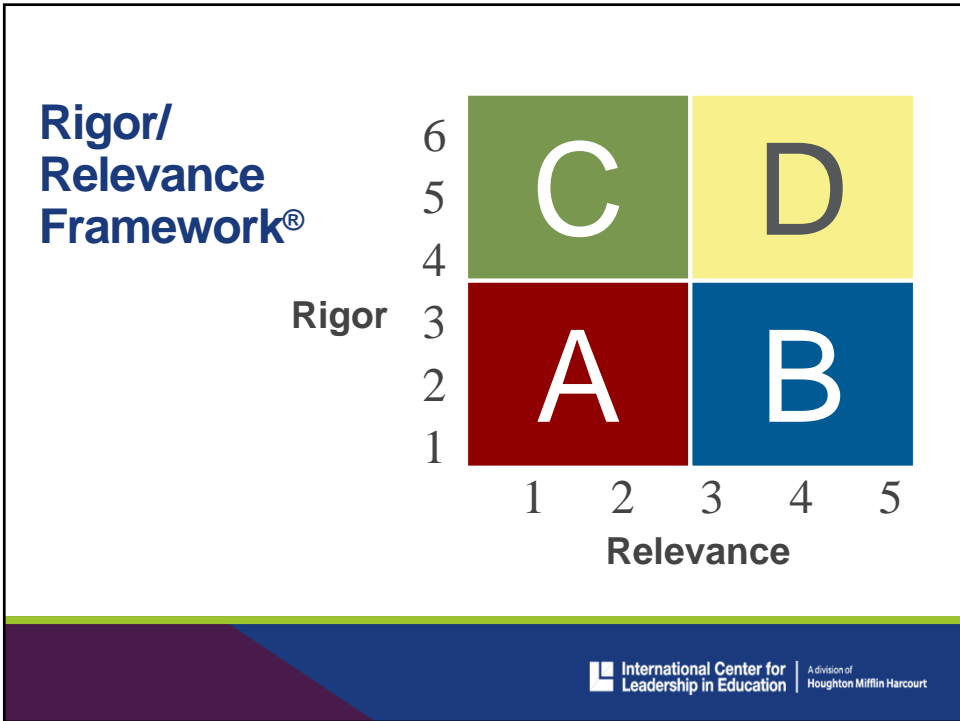
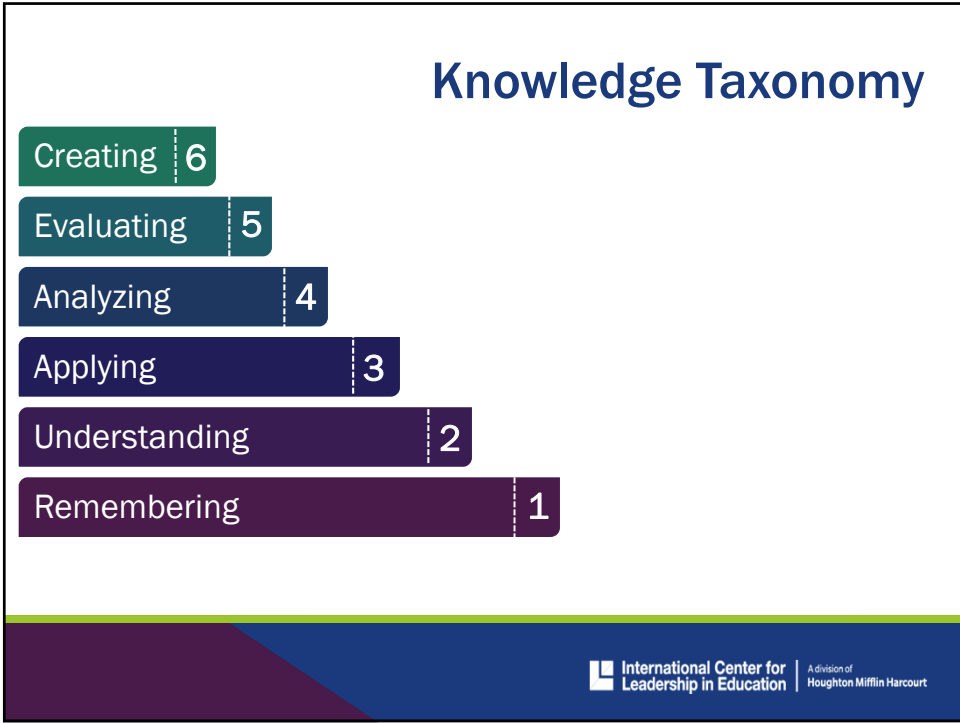
Source: Future of Jobs Report, World Economic Forum

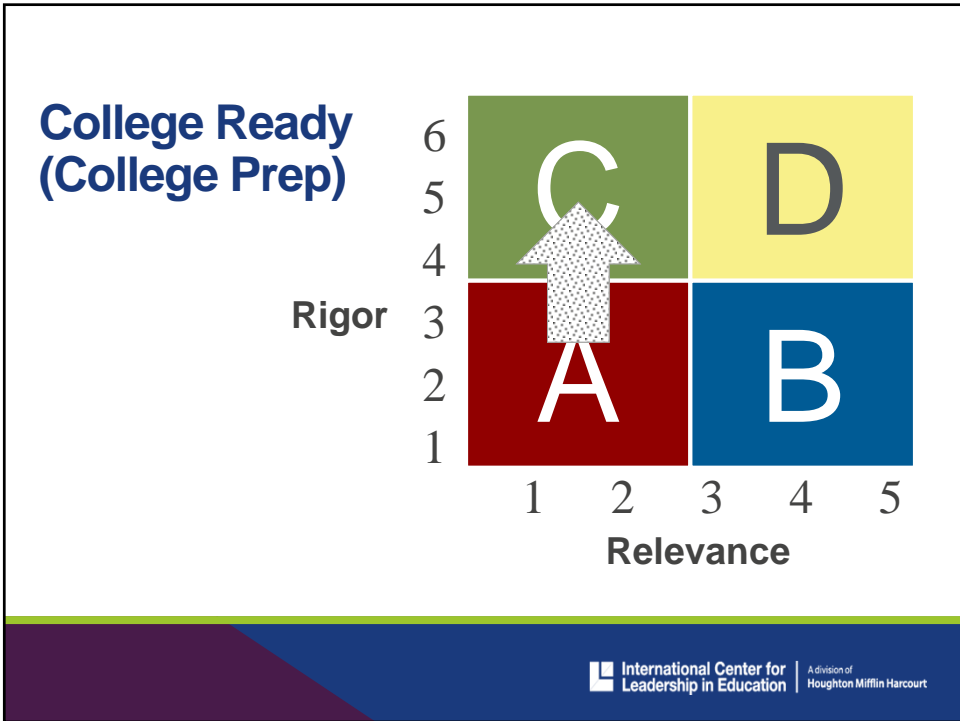
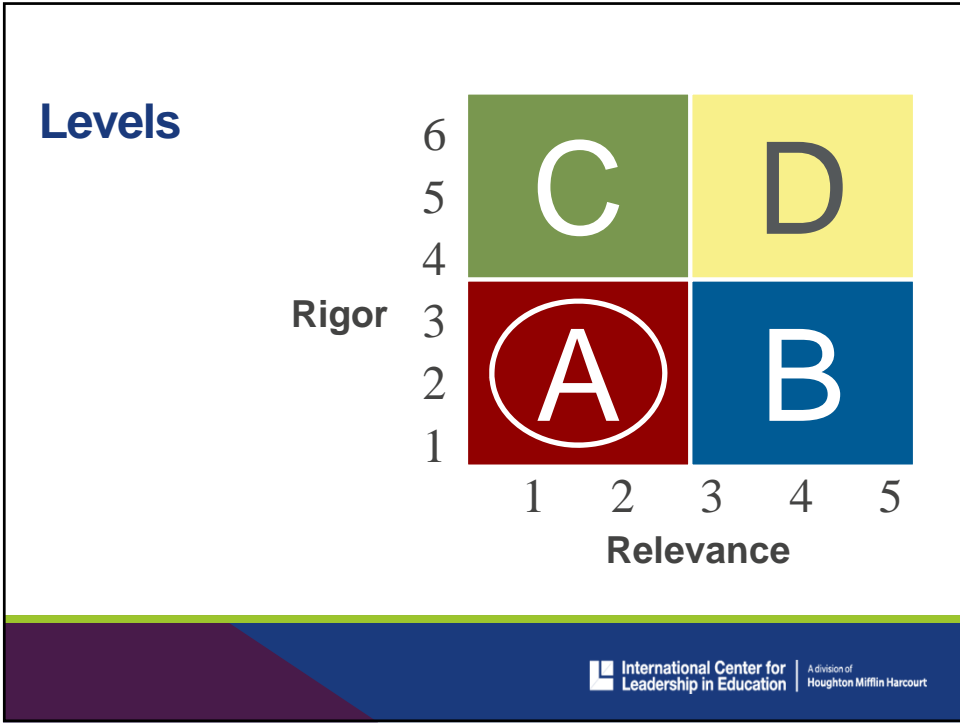
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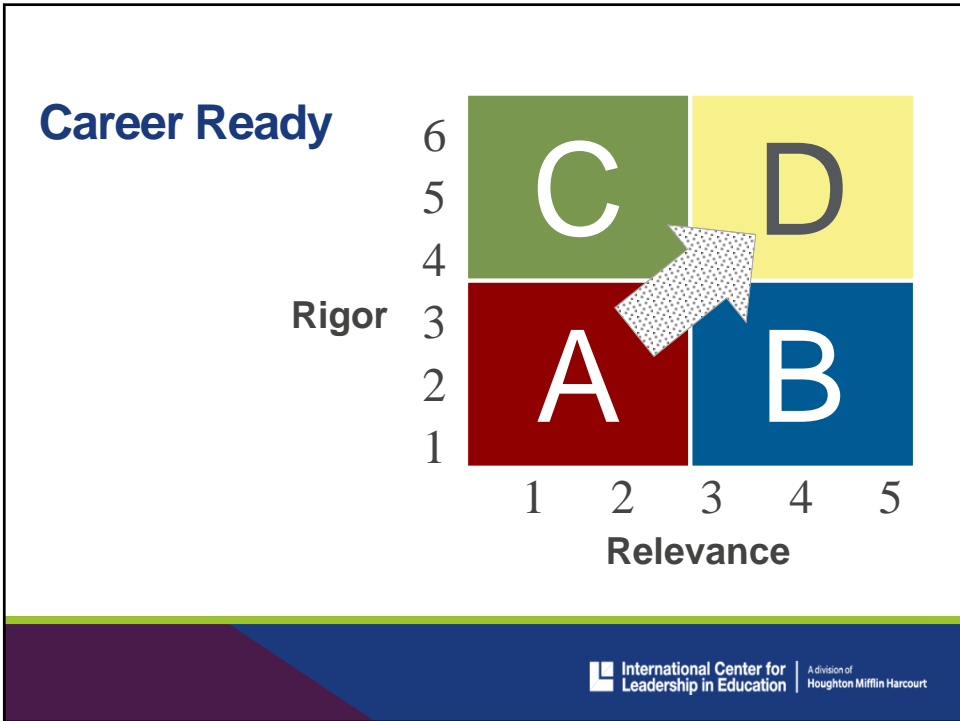
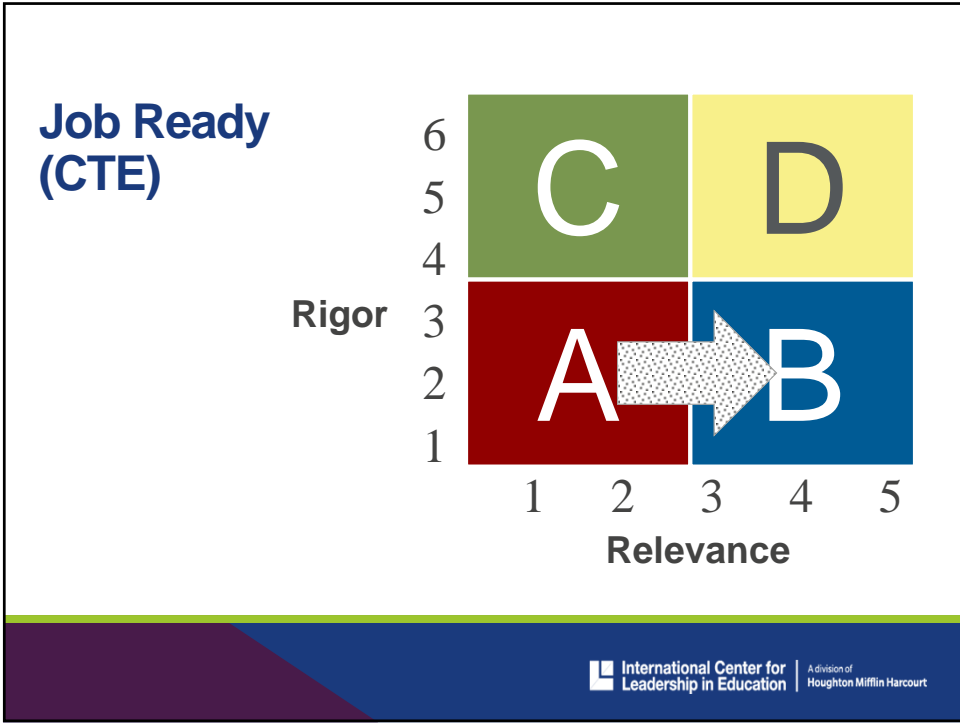
# WHAT

## Application Model









### Top 10 Skills

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Active Listening
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

Source: Future of Jobs Report, World Economic Forum

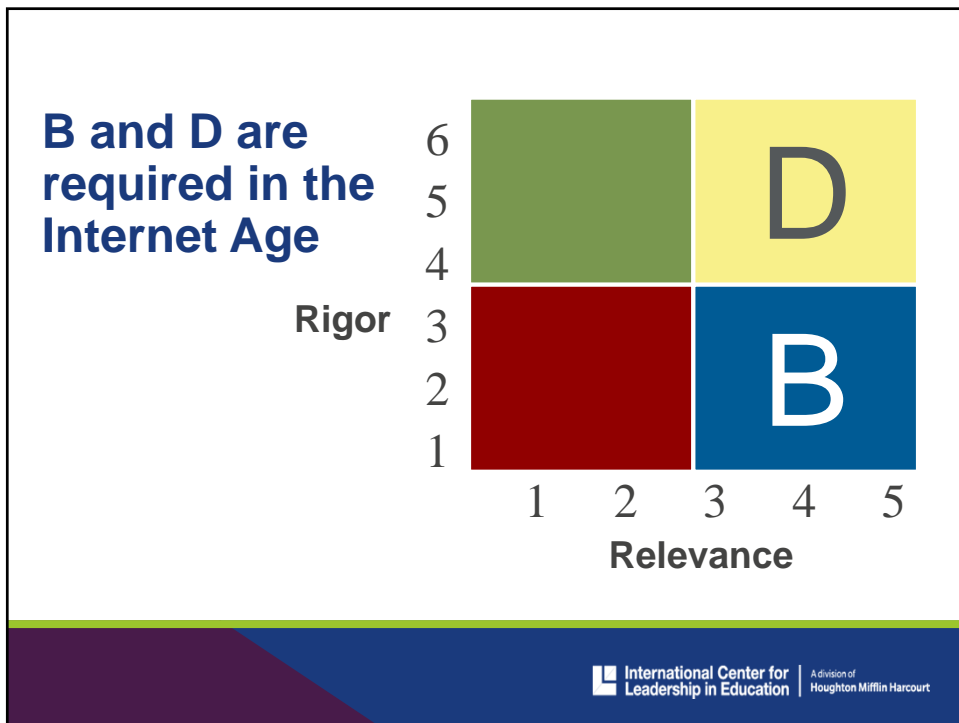
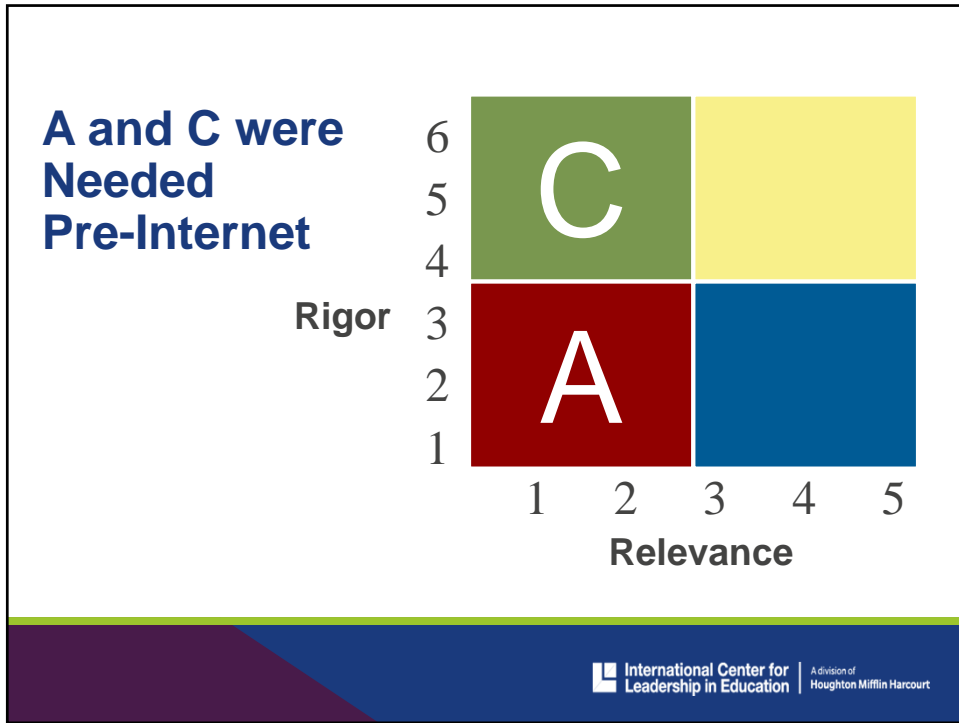
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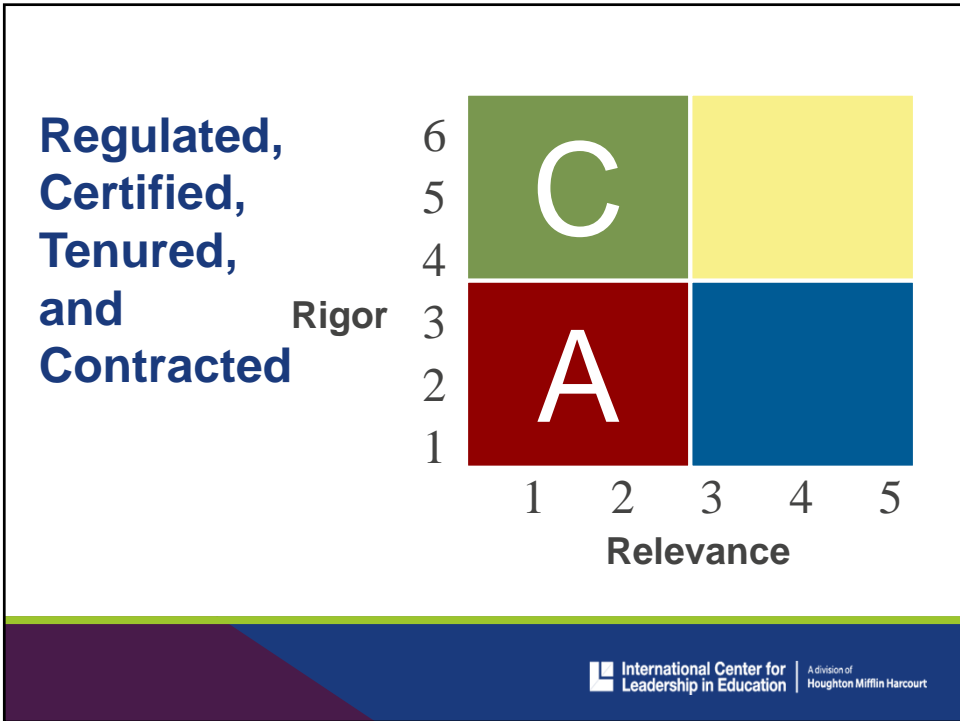
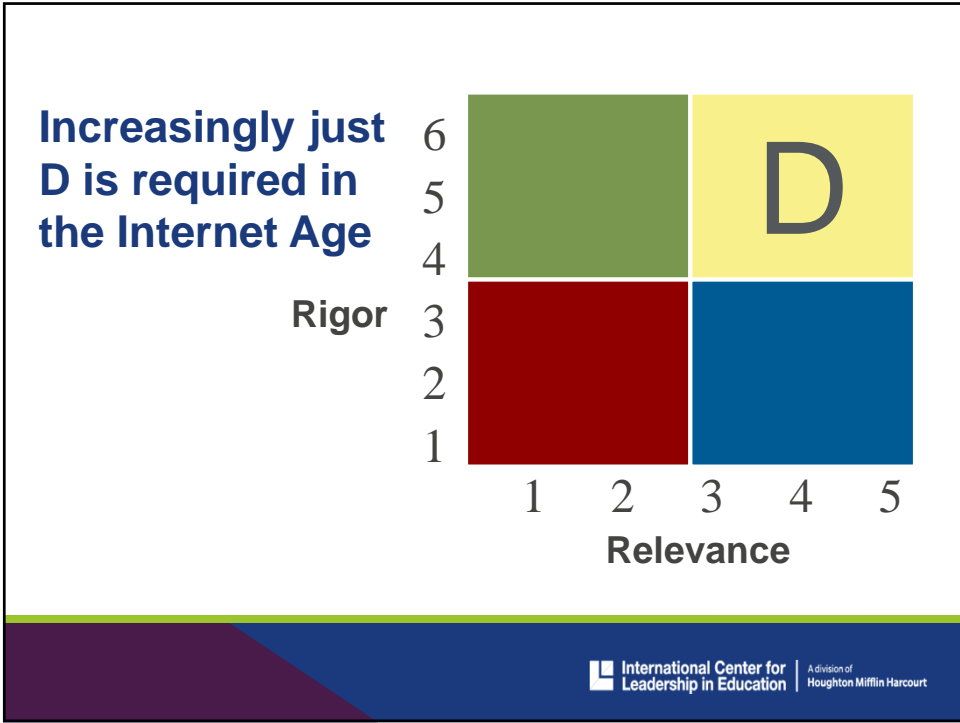
### Levels

Rigor	6	C	D			
	5					
	4					
	3	A	B			
	2					
	1					
		1	2	3	4	5
		Relevance				

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**Make all children all they  
are capable of being,  
BUT  
it is about more than  
standards and tests.**

**Social and Emotional  
Development**

**Social and emotional development needs to be seen as a skill we need to develop in students for success in the workplace, home, and society.**

**It should not be seen simply as a behavior issue we need to address.**

## **Personal Skills**

- Responsibility
- Contemplation
- Initiative
- Perseverance
- Optimism
- Courage
- Respect
- Compassion
- Adaptability
- Honesty
- Trustworthiness
- Loyalty

**It is not a course or program.  
It is a culture.**

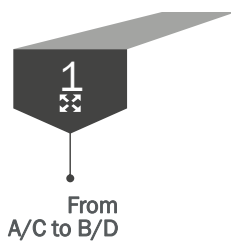


# HOW

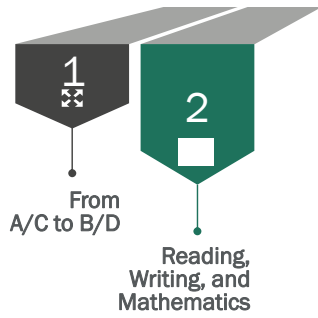
**It all begins with the focus on  
the students, not the standards.**

# Seven Interrelated Fundamental Shifts

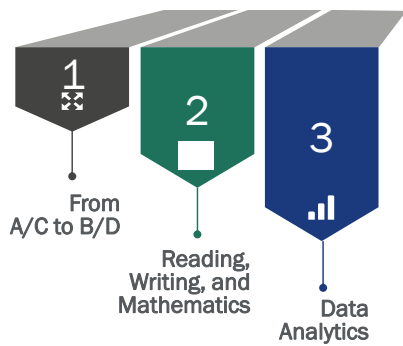
## Seven Interrelated Fundamental Shifts



## Seven Interrelated Fundamental Shifts

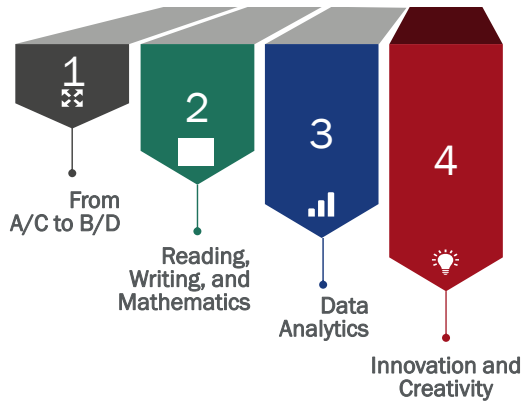


## Seven Interrelated Fundamental Shifts

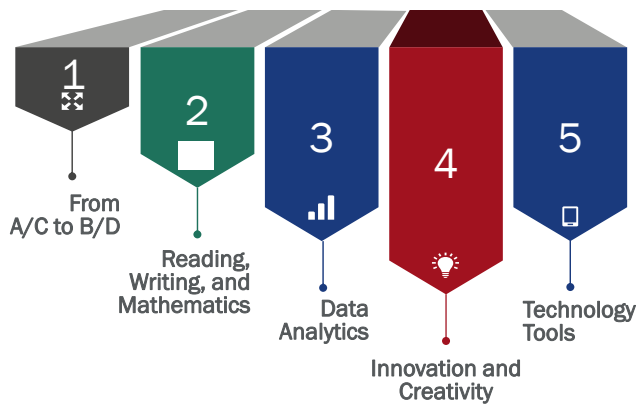


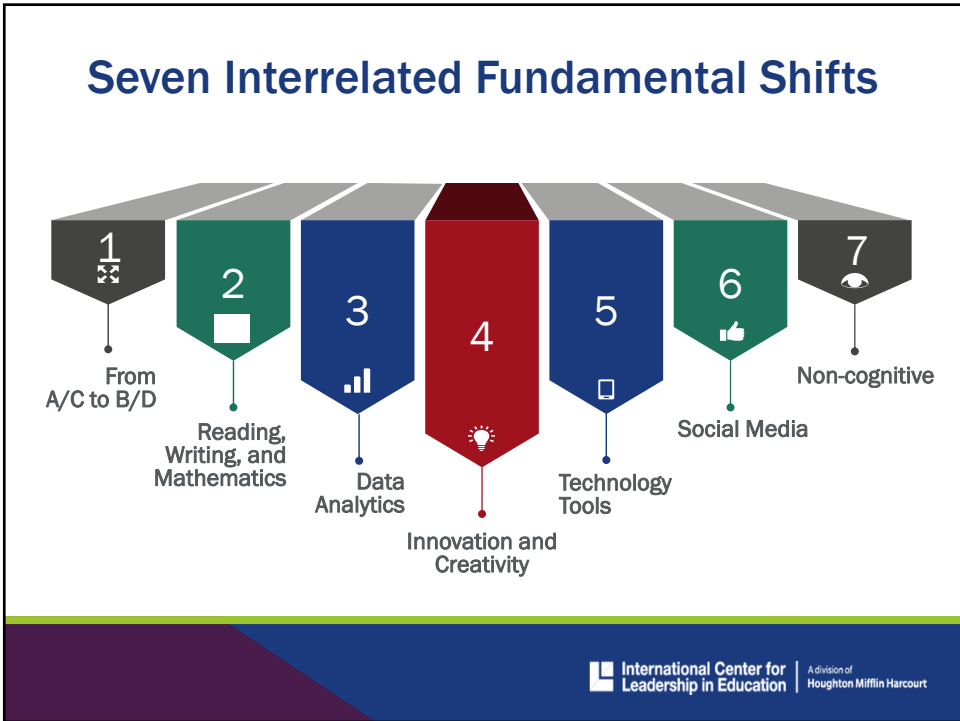
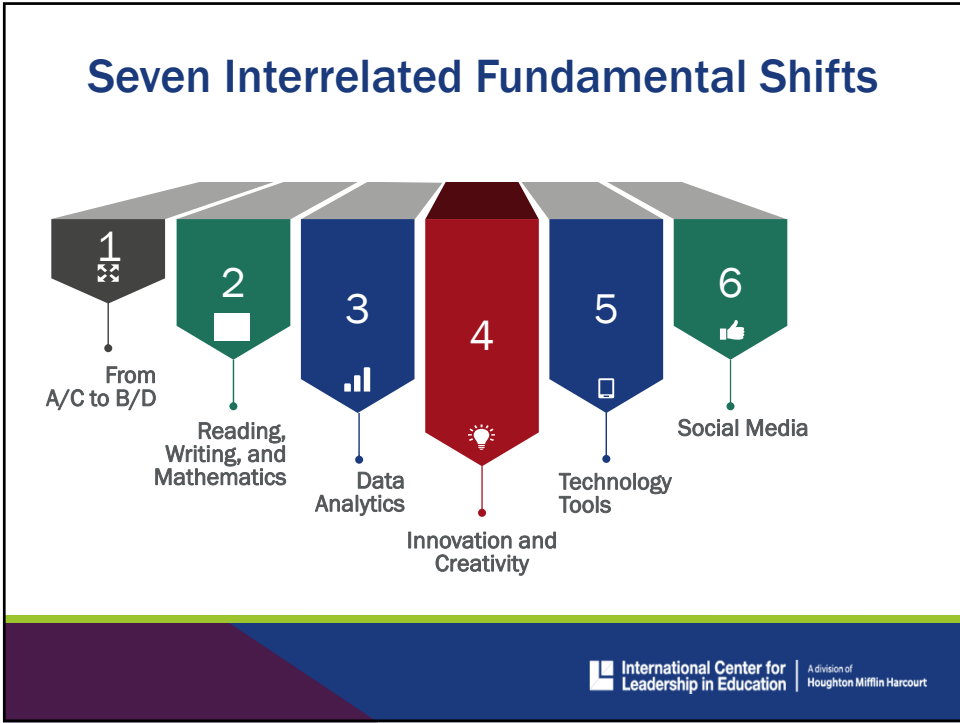


## Seven Interrelated Fundamental Shifts



## Seven Interrelated Fundamental Shifts





## Fundamental Shift in Instruction



Open Educational Resources



Text to Digital



Virtual to Augmented Reality



Gamification

Online



# Yellow Sheets



**26<sup>th</sup> ANNUAL MODEL SCHOOLS CONFERENCE**  
June 24–27, 2018 • Orlando, FL • Marriott World Center

► LEARN MORE at [www.leadered.com/events](http://www.leadered.com/events)

**It all begins with the teacher.**

**Let's help every teacher  
become successful at  
making all students all  
they are capable of being.**