Addressing Today’s Challenges within the Context of Emerging Trends

Bill Daggett, Founder and Chairman

Proactive vs. Reactive
EMERGING TRENDS
Education

Digital/Technology Impact
What is different here?

2005

Pope Benedict XVI

2013

Pope Francis

Web

- 1.0 – informational
  - google
Web

- 1.0 – informational
- 2.0 – relational

Web

- 1.0 – informational
- 2.0 – relational
- 3.0 – anticipatory
Web

- 1.0 – informational
- 2.0 – relational
- 3.0 – anticipatory
  - artificial intelligence

Web

- 1.0 – informational
- 2.0 – relational
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  - artificial intelligence
  - deep data mining
Web

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  - google > ads

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Web

- 1.0 – informational
- 2.0 – relational
- 3.0 – anticipatory
  - artificial intelligence
  - deep data mining
  - google > ads
  - Gmail > ads
  - Wolfram Alpha

Digital Impact

- Digital Literacy
Digital Literacy

• Tools/Applications/Systems
• Digital Footprint

Digital Footprint

• Facebook
• Snapchat
• Instagram
• Vine
Snapchat

Allows users to take pictures and videos and share them with recipients for 1-10 seconds. Users send 400 million messages per day. With a core audience between the ages of 13 and 25.

Snap-Hack

Allows you to save your Snapchats including pictures and videos without notifying the sender.
Digital Footprint

- College Admission
- Applying for a Job
- Boyfriend/Girlfriend (their parents)

... and you thought locker searches were controversial
Digital Literacy

- Tools/Applications/Systems
- Digital Footprint
- Vetting of Sources

Common Core

- 2008 – Conceived
- 2010 – Written
Digital Literacy

Needs to be integrated throughout curriculum not assigned a specific place

Digital Impact

- Digital Literacy
- Delivery System
Technology has transformed how children play and interact. It has transformed the workplace they will enter. But it has not transformed how we educate them.

Digital access enables students to connect to boundaries beyond the school.
Blended private schools in India, China and Africa have 200 million students.

Gaming is increasingly being built based upon brain research.
Gamification

- Engaging

Gamification

- Engaging
- Personalized
Gamification

- Engaging
- Personalized
- Built on Growth Model

Gamification

- Engaging
- Personalized
- Built on Growth Model
- Tied to Standards
Gamification

- Engaging
- Personalized
- Built on Growth Model
- Tied to Standards
- Merging with Online Providers

The Military and the Corporate world are moving to game technology for training
Change in Instruction and Assessments will come from the gaming industry

Will K-12 Education fight or embrace the gamification/online dynamic?
Districts need gamification, online and Digital Literacy policy and plan

Gamification/Online Policy

Educators need to determine what technology/digital world can do better than they can – then determine focus of our irreplaceable value
Flipped Faculty Meetings

Flipped School Board Meetings
Emerging Trends

- Digital
- Career Ready

Are our Students College and Career Ready?
College Freshman Well or Very Well Prepared

- High School Teachers - 89%
- College Instructors – 26%

Source: ACT survey

Freshmen Needing Remediation

1. Two Year College – 51.7%
2. Four Year College – 19.9%
### College Retention Rate 2013
First to Second Year

<table>
<thead>
<tr>
<th>Type of College</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-Year Colleges</td>
<td>55.5%</td>
</tr>
<tr>
<td>Four-Year Colleges</td>
<td>65.2%</td>
</tr>
</tbody>
</table>

Source: ACT

### College Dropout Rate 2013
First to Second Year

<table>
<thead>
<tr>
<th>Type of College</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-Year Colleges</td>
<td>44.5%</td>
</tr>
<tr>
<td>Four-Year Colleges</td>
<td>34.8%</td>
</tr>
</tbody>
</table>

Source: ACT
Average Graduation Rate 1983-2013

- Two-Year Colleges in 3 years – 29.1%
- Four-Year Colleges in 5 years – 36.6%

Source: ACT

Virginia 4 Year Public College 49.1%
Virginia 2 Year Public College
7.8%

Florida 4 Year Public College
35.4%
Florida 2 Year Public College
14.3% in 2 years

Florida
38.2% graduate in 150% time
14.3% graduate in 100% time

California 4 Year Public College
34.8%

California
65.1% graduate in six years
34.8% graduate in four years
California 2 Year Public College
10.1%

Missouri 4 Year Public College
29.6%
Missouri 2 Year Public College
12.0%

Texas 4 Year Public College
24.4% in four years
Texas 2 Year Public College
6.1% in 2 years

Georgia 4 Year Public College
24.0%
Georgia 2 Year Public College
17.0%

Georgia
25.1% graduate in 150% time
17.0% graduate in 100% time

Oklahoma 4 Year Public College
21.5%

Oklahoma
45.4% graduate in six years
21.5% graduate in four years
Oklahoma 2 Year Public College

9.0%

College Challenges

1. Success of Graduates
2. Cost
College tuition rates have increased on average at twice the rate of inflation in the past 17 years

Source: ACT

2013 college grad average loan debt was $35,200

Source: ACT
Are the higher success rates for college grads due to their education or that they have the personal attributes that enables them to succeed in college and also enables them to succeed in the workplace?
Career Ready

13 Million Americans are Unemployed

BUT

3.8 million jobs in the U.S. remain unfilled
Your Major Matters
A LOT

Bachelor’s Degrees

1. Business
2. General Studies
3. Social Science and History
4. Psychology
5. Health Professions
6. Education
7. Visual and Performing Arts
8. Engineering and Technology
9. Communications and Journalism
10. Computer and Information Science

Source: National Center for Education Statistics
Bachelor’s–Competing Nations

1. Business (1)
2. General Studies (10)
3. Social Science and History (6)
4. Psychology (9)
5. Health Professions (4)
6. Education (5)
7. Visual and Performing Arts (8)
8. Engineering and Technology (2)
9. Communications and Journalism (7)
10. Computer and Information Science (3)

Source: National Center for Education Statistics

Job Shares by Skill Group, 1980-2010

Percent

High-skill Upper-middle Lower-middle Low-skill

1980
18.9 21.3 47.1

2040
25.4 20.7 37.7

Sources: NY Fed Calculations, U.S. Census Bureau
Lost Jobs

- Telemarketers - 99%

source: The Future of Employment
C. Frey and M. Osborne
Lost Jobs

- Telemarketers - 99%
- Secretarial/Adm. Assistant - 96%

source: The Future of Employment
C. Frey and M. Osborne

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Lost Jobs

- Telemarketers - 99%
- Secretarial/Adm. Assistant - 96%
- Accountant/Auditors – 94%

source: The Future of Employment
C. Frey and M. Osborne
## Lost Jobs

- Telemarketers - 99%
- Secretarial/Adm. Assistant - 96%
- Accountant/Auditors – 94%
- Technical Writers – 89%

source: The Future of Employment  
C. Frey and M. Osborne

## Lost Jobs

- Machinists – 65%

source: The Future of Employment  
C. Frey and M. Osborne
Lost Jobs

- Machinists – 65%
- Economist – 43%

source: The Future of Employment
C. Frey and M. Osborne

Lost Jobs

- Machinists – 65%
- Economist – 43%
- Health Technologists – 40%

source: The Future of Employment
C. Frey and M. Osborne
Workplace Needs Workers

- Solve Unstructured Problems
- Work with New Information
- Do Non-Routine Manual Tasks

You need skill that can not be translated into an algorithm
Emerging Trends

- Digital
- Career Ready
- Focus on Application

Application Model

1. Knowledge in one discipline
2. Application within discipline
3. Application across disciplines
4. Application to real-world predictable situations
5. Application to real-world unpredictable situations
Knowledge Taxonomy

1. Awareness
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation
Levels

Bloom's

<table>
<thead>
<tr>
<th>6</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
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<tr>
<td>3</td>
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<td>2</td>
<td></td>
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<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 1 | 2 | 3 | 4 | 5 |

Application

Rigor/Relevance Framework

<table>
<thead>
<tr>
<th>6</th>
<th>Analyze the graphs of the perimeters and areas of squares having different length sides.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Determine the largest rectangular area for a fixed perimeter.</td>
</tr>
<tr>
<td>4</td>
<td>Identify coordinates for ordered pairs that satisfy an algebraic relation or function.</td>
</tr>
<tr>
<td>3</td>
<td>Determine and justify the similarity or congruence for two geometric shapes.</td>
</tr>
<tr>
<td>2</td>
<td>Express probabilities as fractions, percents, or decimals.</td>
</tr>
<tr>
<td>1</td>
<td>Classify triangles according to angle size and/or length of sides.</td>
</tr>
<tr>
<td></td>
<td>Calculate volume of simple three-dimensional shapes.</td>
</tr>
<tr>
<td></td>
<td>Given the coordinates of a quadrilateral, plot the quadrilateral on a grid.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>Obtain historical data about local weather to predict the chance of snow, rain, or sun during year.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Test consumer products and illustrate the data graphically.</td>
</tr>
<tr>
<td>2</td>
<td>Plan a large school event and calculate resources (food, decorations, etc.) you need to organize and hold this event.</td>
</tr>
<tr>
<td>1</td>
<td>Make a scale drawing of the classroom on grid paper, each group using a different scale.</td>
</tr>
<tr>
<td></td>
<td>Calculate percentages of advertising in a newspaper.</td>
</tr>
<tr>
<td></td>
<td>Tour the school building and identify examples of parallel and perpendicular lines, planes, and angles.</td>
</tr>
<tr>
<td></td>
<td>Determine the median and mode of real data displayed in a histogram.</td>
</tr>
<tr>
<td></td>
<td>Organize and display collected data, using appropriate tables, charts, or graphs.</td>
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</table>
Rigor/Relevance Framework

6
- Express probabilities as fractions, percents, or decimals.
- Classify triangles according to angle size and/or length of sides.
- Calculate volume of simple three-dimensional shapes.
- Given the coordinates of a quadrilateral, plot the quadrilateral on a grid.

5
- Determine the median and mode of real data displayed in a histogram.
- Organize and display collected data, using appropriate tables, charts, or graphs.

4
- Analyze the graphs of the perimeters of shapes.
- Obtain historical data about local weather to predict trends.

3
- Calculate percentages of advertising in a newspaper.
- Tour the school building and identify examples of parallel and perpendicular lines, planes, and angles.
- Determine the median and mode of real data displayed in a histogram.
- Organize and display collected data, using appropriate tables, charts, or graphs.

2
- Identify congruence and similarity principles.
- Analyze geometric figures, using algebraic relations of side lengths, angles, and perimeters.

1
- Classify and determine congruence and similarity for shapes.
- Recognize and determine congruence and similarity for triangles.
Quad D – Skills and Knowledge

- Decision Making
- Innovation/Creativity
- Goal Setting/Results Driven
- Multi Tasking
- Work with others
Work Place Needs

- Solve Unstructured Problems (Quad D)
- Work with New Information (Quad D)
- Do Non-Routine Manual Tasks (Quad B)

Reading Study Summary

Interquartile Ranges Shown (25% - 75%)

* Source of National Test Data: MetaMetrics
SAT, ACT, AP

Quad D

Challenges our Rules, Regulations, Certifications, Contracts, Tenure and Bell Schedules
Emerging Trends

- Digital
- Career Ready
- Application
- Data Analytics to implement Growth Models

Medicine as prototype
Intervention To Prevention

Population Health Management

1. Low Risk Patients
2. Medium Risk Patients
3. High Risk Patients
Shift from Volume to Outcomes

- Affordable Care Act requires in 2015
- Medicare
- Medicaid
- Private Insurance

Health Care Cost

<table>
<thead>
<tr>
<th>Risk Group</th>
<th>% of population</th>
<th>% of total Health care cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td>50 %</td>
<td>3%</td>
</tr>
<tr>
<td>Medium Risk</td>
<td>45 %</td>
<td>47%</td>
</tr>
<tr>
<td>High Risk</td>
<td>5 %</td>
<td>50%</td>
</tr>
</tbody>
</table>
Shift from Volume to Outcomes

- Affordable Care Act requires in 2015
- Medicare
- Medicaid
- Private Insurance

From Fitbit to Chip
FollowMyHealth

Web

- 1.0 – informational
- 2.0 – relational
- 3.0 – anticipatory
  - medicine
  - financial investments
  - education
From Summative Evaluation To Formative Evaluation

Learning Analytics
With learning analytics software, students will have curricula and coursework specifically designed to their interest, needs and learning style

Emerging Trends

- Digital
- Career Ready
- Application
- Data Analytics to implement Growth Models
- Personal Skills
Guiding Principles

- Responsibility
- Contemplation
- Initiative
- Perseverance
- Optimism
- Courage

- Respect
- Compassion
- Adaptability
- Honesty
- Trustworthiness
- Loyalty

System
Session – 25
“Creating Systemwide Focus on Effectiveness and Efficiency: Daggett System for Effective Instruction”
Tuesday 2:30
Organizational Leadership

• Create a Culture

Session – 26
“Creating a Culture to Support the Transition to Higher Standards”
Wednesday 8:00
Organizational Leadership

• Create a Culture
• Needs Assessment

Solution Center
Instructional Leadership

- Professional Development
  - Rigor and Relevance
  - Literacy across the Curriculum
  - Personal Skill Development

Solution Center
Teaching

• Instructional Support/Materials
  - Nextpert
  - Innovative Emerging Trends Network
Announcement

Washington 4 Year Public College
41.1%

- Washington
  - 68.9% graduate in six years
  - 41.1% graduate in four years
Washington 2 Year Public College
14.9%

New York 4 Year Public College
37.8%
New York 2 Year Public College
10.9%

North Carolina 4 Year Public College
35.1%
North Carolina 2 Year Public College
12.3%

Michigan 4 Year Public College
32.8%
Michigan 2 Year Public College
7.7%

Kansas 4 Year Public College
26.2%
Kansas 2 Year Public College
24.1%

Tennessee 4 Year Public College
19.7%
Tennessee 2 Year Public College
8.0%

Tennessee
11.3% graduate in 150% time
8.0% graduate in 100% time

Louisiana 4 Year Public College
15.5%

Louisiana
38.8% graduate in six years
15.6% graduate in four years
Louisiana 2 Year Public College
8.8%