Building A Stronger Digital Link Between Learning & Assessment
Michelle R. Davis
Senior writer, Education Week Digital Directions

Follow Michelle on Twitter: @EWmdavis
Building a Stronger Digital Link Between Learning and Assessment

Expert Presenters:

John Bailey, executive director, Digital Learning Now!, Tallahassee, Fla.

Mike McDonough, director of secondary education, Hilliard City Schools, Ohio

Jake Grantier, secondary instructional coach, science, Hilliard City Schools, Ohio
An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
The Opportunity of Personalized Learning

Digital Learning Now! An Initiative of Excel In Ed

John Bailey
Education Equity for All

- **Personalize** learning by leveraging new technology platforms and data algorithms to support differentiated instruction.

- **Empower** teachers, parents, and leaders with real-time information to adjust instruction, match the right interventions to the right students at the right time, and glean new insight into student learning.

- **Expand** access to the best content, resources, and learning opportunities, thereby increasing choices available to students, regardless of location.

- **Enable** new models of schools, instruction, and interventions.
What is Personalized Learning?

**Individualized:** Paced to a student’s learning needs.

**Personal Learning Paths:** Learning goals and objectives mapped to student’s unique needs.

**Individual Mastery:** Continually assesses student progress toward clear standards and competencies. Students advance based on demonstrated mastery.

**Differentiated:** Leveraging learner profiles that captures individual skills, strengths, weaknesses, preferences, interests, and aspirations of a student.

**Flexible Learning Environment:** Multiple instructional delivery approaches that continuously optimizes the resources and schedules in support of student learning.
Reimagining the Classroom

From Teaching to the Middle...

...To Differentiating Learning

Source: New Classrooms
Real Time Feedback

New data and formative assessment systems provide real-time feedback to teachers.

Adaptive learning platforms use assessment and other data to help the sequence and pacing for students.
Learning Playlists

Technology can help take each individual student needs and preferences and create personal “playlists” of activities for the day.

Learning stations use instructional approaches such as live teacher-led instruction, student collaboration, software, or virtual instructors.

Students are assessed daily to determine mastery or need more time. Determines what each student will work on the following class.

Source: New Classrooms
New School Models

Reimagining the school day using blended learning technology that choreographs activities, assignments, and lessons.

Source: FSG Blended Learning Case Studies
Rocketship Education

Rocketship Blended Learning Model and Individualized Instruction

1. In class, teachers introduce new topics and conduct guided discussions.
2. In Learning Lab, students strengthen basic skills via computer programs.
3. Frequent assessments give early, actionable insights into students’ strengths and weaknesses.
4. Response to Intervention tutors provide intensive, focused remedial work with students.
5. In class, teachers focus on critical thinking skills.

Fig. 1
Rotational Blended Learning Model at Rocketship
Rotations will be explained in detail in the “Instructional Model” of the case study.

7:30 AM

Breakfast
“Launch”

8:00 AM

60 Minutes
Small group work

80 Minutes
Guided reading

60 Minutes
Stations (3 groups):
- Reading Center
- Writing Center
- Teacher-led small-group instruction

30-40 Minutes
Literacy (including Social Studies)

30-40 Minutes
Math

Learning Lab: Literacy, Math, Enrichment

Tutoring
For students in 8th Grade Standards-Ready Instruction

4 classes
in lab at one time:
- Basic skills
- Drills and assessments

4:00 PM

Source: FSG Blended Learning Case Studies
With Summit Denali, we have the opportunity to design an entire school and educational experience around the question, ‘How does learning best occur?’ By putting student learning at the center and using technology to allow teachers to do what they do best, we will be able to offer a truly optimized learning environment for every individual student.

Joe Bielecki, Summit Denali
Personalized Learning Works!

**Rand Study:** 18,000 students which found an eight percentile improvement over the control group in math scores – equivalent to a 20 to 30 point improvement on the SAT. If adopted school-wide, it would take a failing school and bring it up to the level of an average school.

A Read180 study evaluated by the [What Works Clearinghouse](#) showed that their blended learning intervention had positive effects on comprehension and general literacy achievement for adolescents. Similar [results](#) from Striving Readers evaluation..

A U.S. Department of Education [meta analysis](#) found that students in blended courses outperformed the fully online students.

[Teach for One](#) generating more than one years of learning gains.

[What Works Clearinghouse](#) finding promising results with group of students using DreamBox.
How to Start the Process

1. Start with learning goals to determine best model. Platforms and devices are second tier decisions.

2. Demand integration of student information systems (SIS) and learning platforms with single sign-on for students and easy grouping for teachers.

3. Give preference to platforms that support multiple content providers and teacher-developed content.

4. Prioritize standards-based gradebook and reporting functionalities—they should provide actionable information and the tools to manage a competency-based learning environment.

5. Build into all contracts compliance with state and federal privacy laws.

6. Think about what needs to change in terms of class design and scheduling.

7. Think about the new roles for teachers, coaches, paraprofessionals, etc. in these new models.
Policy Enablers

- Seat-time flexibility (Carnegie Unit/Calendar).
- Flexibility with class size limitations.
- Ongoing assessment opportunities for students to demonstrate mastery.
- Competency-based approaches to assessment and credit-granting to ensure that learning counts, no matter where or when it occurs.
- Catalyst funding to help jump start new models.
PARCC and SBAC

• Formative assessment data with new question types can provide progress data for personalized learning.

• PARCC guide on competency-based pathways using new assessment system.

• Both have competency-based working groups to guide current and future work.
Implementation Guides

10 interactive white papers that provide specific guidance regarding the adoption of the Common Core State Standards and the shift to personal digital learning.

- Navigating the Digital Shift
- Funding the Shift to Digital Learning
- Data Backpacks: Portable Records & Learner Profiles
- Getting Ready for Online Assessments
- Improving Conditions & Careers
- Blended Learning Implementation Guide Version 2.0
Continue the Conversation

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Building a Stronger Digital Link Between Learning and Assessment
Learning Menus: Personalization in the Classroom

Mike McDonough
Director of Secondary Curriculum

Jake Grantier
Secondary Instructional Coach - Science
Hilliard City Schools

- 9th largest district in Ohio
  - 15,870 students
- Suburb of Columbus, Ohio
- Embrace Diversity
  - 39 Languages and 44 Countries
  - 12% on an Individualized Education Plan (IEP)
  - Nearly 25% are Economically Disadvantaged

www.hilliardschools.org
Today’s Goals

• Demonstrate innovative instructional practices that promote individualized student-centered learning

• Emphasize the need for a culture of collaboration, reflection, authenticity, and innovation
## Examples of Learning Menus

<table>
<thead>
<tr>
<th>Draw an original roller coaster design</th>
<th>Learn about the <strong>history</strong> of Amusement Parks</th>
<th>Lab: Potential/Kinetic Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Your coaster will be accurately labeled with specific <strong>ENERGY</strong> and <strong>MOTION</strong> terms. You will also create an advertisement for your award-winning coaster!</td>
<td>* This activity involves internet research and responding to a specific set of questions.</td>
<td>* In this lab activity, you will analyze changes in <strong>potential</strong> and <strong>kinetic energy</strong> of a steel marble on a metal track.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lab: Speedy Spool</th>
<th>Design a virtual roller coaster</th>
<th>Learn about <strong>Newton’s Laws of Motion</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Using toothpicks, a rubber band and other simple household items, you will observe how <strong>potential energy</strong> can be transformed into <strong>kinetic energy</strong></td>
<td>* For this web-based activity, you will create a roller coaster then <strong>analyze its success</strong> to determine if your virtual idea could become a reality!</td>
<td>* This is an on-line learning activity in which you will learn about Newton’s Laws of Motion and then determine how these laws are demonstrated in roller coaster physics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Visit an on-line skate park simulation</th>
<th>Lab: Speed of a wooden car</th>
<th>Create a Comic Strip</th>
</tr>
</thead>
<tbody>
<tr>
<td>* A visit to this virtual skate park will help you to recognize the relationship between <strong>FRICTION</strong> and <strong>Potential / Kinetic Energy.</strong></td>
<td>* In this investigation, you will roll a wooden car down an incline to determine how the <strong>height of an incline affects potential/kinetic energy</strong> of a wooden car. <strong>SPEED</strong> will also be calculated.</td>
<td>* Create a 5-frame comic strip that demonstrates your understanding of energy and motion (specific terms must be included)</td>
</tr>
</tbody>
</table>
Examples of Learning Menus

### Continental Drift Choice Board

<table>
<thead>
<tr>
<th>Required</th>
<th>Negotiable (Pick 1)</th>
<th>Optional</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3 Guided Notes</td>
<td>Wegener’s Puzzling Evidence</td>
<td>Read article and complete current event sheet</td>
</tr>
<tr>
<td>Great Minds – Alfred Wegener</td>
<td>Put yourself in Wegener’s shoes! Use current evidence to piece together the continents of the past.</td>
<td>Articles Available</td>
</tr>
<tr>
<td>(SciShow found on webpage)</td>
<td></td>
<td>- When Continental Drift Was Considered</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pseudoscience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Piecing Continents Together</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Continental Drift!</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Articles of your choice- Teacher Approved</td>
</tr>
<tr>
<td>Plate Tectonics Activity (BBC Bitesize found on webpage)</td>
<td>Continental Drift Virtual Lab</td>
<td>The World in 300 Million Years</td>
</tr>
<tr>
<td></td>
<td>Figure out the way the continents used to look and line up the evidence to create Pangaea.</td>
<td>We know the way the continents look has changed over the past 300 million years. What will it look like 300 million years in the future? You decide!</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Continental Drift Timeline- The Main Players</td>
</tr>
<tr>
<td></td>
<td>Gondwanaland Challenge</td>
<td>Investigate the roles of Hess, Wegener, F. Bacon, Holmes, and Dietz and decide the chronology of their contributions.</td>
</tr>
<tr>
<td></td>
<td>Are you up for it? Use geography to place clues and solve the Pangaea puzzle. This choice comes with the bonus of bragging rights!</td>
<td></td>
</tr>
<tr>
<td>In-Class Assessment</td>
<td></td>
<td>Optional 1</td>
</tr>
<tr>
<td>(choose 1)</td>
<td></td>
<td>Optional 2</td>
</tr>
<tr>
<td>*Standard Quiz</td>
<td></td>
<td>Optional 3</td>
</tr>
<tr>
<td>*3-2-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Wegener Paragraph</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Teacher Use:**

- 1.3 Notes: ______ (4 pts)
- Great Minds: ______ (3 pts)
- PT Activity: ______ (3 pts)
- In-Class Assessment: ______ (10 pts)

**Teacher Use:**

- Negotiable: ______ (10 pts)

**Teacher Use:**

- Optional 1:
- Optional 2:
- Optional 3:
Examples of Learning Menus

Air Unit Essential Questions

1. How does the composition of Earth’s atmosphere affect atmospheric properties and behavior?
2. How does solar radiation interact with the atmosphere to influence conditions on Earth?
3. What are major causes and consequences of acid rain?
4. How can air pollution be minimized?

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning Targets</th>
<th>Learning Opportunities</th>
<th>Suggested Completion Date</th>
<th>Date Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.1-A.7</td>
<td>• Identify the major components of the troposphere</td>
<td>□ Required Lab – Properties of Gases</td>
<td></td>
<td>March 20</td>
</tr>
<tr>
<td></td>
<td>• Describe how the properties of the atmosphere change with increasing altitude</td>
<td>□ Required Lab – Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Define and apply the concept of pressure using appropriate units</td>
<td>□ Required Lab – Kinetic Molecular Theory</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Describe the kinetic molecular theory of gases</td>
<td>(WB p. 11-12)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ A.1-A.7 Reading Guide</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ PowerPoint – Pressure</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>□ Graphing Atmospheric Data (WB p. 3-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ A.1-A.7 Section Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Video – Atmosphere (WB p. 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Video – Pressure (WB p. 7-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>□ Discussion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Tiered Learning Menus

## 20-Point Opportunities - Evaluation and Synthesis

- Create physical models of all types of matter (LT 30-31) – 3pts/substance listed in 31.a and 31.b and 3 pts for answering LT 30
- Create an iMovie of the Phases of Matter that goes through LT 28-29

<table>
<thead>
<tr>
<th>Point Selection Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________/20</td>
</tr>
</tbody>
</table>

## 10-Point Opportunities - Application and Analysis

- Interpret and Identify Types of Matter (LT 28-31)
- Types of Matter Graphic Organizer (LT 28-31)

<table>
<thead>
<tr>
<th>Point Selection Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________/10</td>
</tr>
<tr>
<td>____________/10</td>
</tr>
</tbody>
</table>

## Required Learning Opportunities

- Vocabulary (LT 28-31)
- BN Matter and Is it Matter? (LT 28-31)
- Phases of Matter – Understanding Solids, Liquids, and Gases Notes (LT 28-29)
- Properties of Gases Lab (LT 28-29)
- Observing Phase Changes Lab (LT 28-29)
- Pure Substances vs. Mixtures Inquiry Activity (LT 30-31)
- Pure Substances vs. Mixtures Notes (LT 30-31)
- Types and Phases of Matter Review (LT 28-31)

<table>
<thead>
<tr>
<th>POINTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>____________/20</td>
</tr>
</tbody>
</table>
Purpose of Learning Menus

• Allow *teachers* to
  – Facilitate authentic, individualized, self-paced, and student-centered learning environments
  – Provide all students opportunities to grow, apply understandings, and demonstrate mastery
Purpose of Learning Menus

• **Allow students to**
  – participate in multiple and varied tasks
  – practice and reinforce skills
  – demonstrate and extend their conceptual understandings
Assessments, Instruction, and Intervention

• Formative Assessments

• Instructional Scaffolding
  – *Self-paced is not self-taught*

• Authentic Summative Assessments
Observed Outcomes
Observed Outcomes

- Responsive Learning Environments

- Cooperative Teaching and Learning
Challenges and Questions

- Balanced Approach to Instruction
- Management of Learning Environment
- Professional Collaboration
Contact Information

• Mike McDonough
  – Director of Secondary Curriculum
  – Mike_McDonough@hboe.org
  – @mcdonough_mike

• Jake Grantier
  – Secondary Instructional Coach – Science
  – Jacob_Grantier@hboe.org
  – @jagrantier
Amplify.

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Building a Stronger Digital Link Between Learning and Assessment
Amplify’s best practices for a successful Common Core assessment program

Four options to acquiring the right content:

<table>
<thead>
<tr>
<th></th>
<th>Option 1: Align Legacy Assessments to the Common Core</th>
<th>Option 2: Create New Assessments</th>
<th>Option 3: Wait for Consortia Content</th>
<th>Option 4: Purchase Assessment Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td>Depends on developer</td>
</tr>
<tr>
<td>Expense and Time</td>
<td>Moderate</td>
<td>High</td>
<td>Moderate</td>
<td>Depends on quality of content and platform</td>
</tr>
<tr>
<td>Reporting</td>
<td>Weak data</td>
<td>Limited report variety</td>
<td>Insufficient detail</td>
<td>Depends on relationship between content provider and platform developer</td>
</tr>
</tbody>
</table>
Selecting good content

Important criteria:

1. Constructed response items
2. Target several skills
3. Text dependent reading questions
4. Distractors and rationales
5. Effective teacher guides
6. Technology enhanced items
A technology platform that works with content

Features to look for:

1. Tools that help you build CCSS assessments
2. Support for district-wide communication
3. Reporting that matches guidelines
4. Support for technology-enhanced items
5. Intuitive search and data analysis
6. Recommended instructional resources
Amplify’s Solution: mCLASS Beacon

mCLASS® Beacon™ = Common Core assessment content + Common Core technology platform

www.amplify.com/beacon
An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
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Required Reading from *Education Week*:

**Technology Counts 2014: Digital Advances Shaping K-12 Testing**
The 17th edition of *Education Week*’s annual report on educational technology examines technology developments that have prompted a rethinking of assessment.

**Spotlight on Changing State of Assessment**
Good teaching and quality assessments go hand-in-hand to support students in the classroom. In this Spotlight discover how formative assessments support teaching and learning, see how testing is changing in the common-core era, and examine key factors needed to build high-quality assessments.