Evolving Personalized Learning

Maximizing K12 Expenditures to Support Instructional Reform

A position paper on the role of interoperability standards in evolving K12 education

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www.imsglobal.org/I3lc/

Introduction

A rare alignment of the legislative, pedagogical and technical trends currently impacting education is providing an opportunity to dramatically and positively evolve K12. The potential synergy among these trends, if acted on decisively, can be leveraged to institute a K12 instructional approach that is academically rigorous, appropriately social, and responsive to all K12 demographics at an individual level. These trends are iterated below. An explanation of the synergistic role of each is included in Appendix 1.

- Common Core State Standards (CCSS)
- PARCC[1]/SBAC[2] Assessment Reforms
- Ecosystem[3] Interoperability Standards
- Race to the Top (RTTT) Educational Ecosystems
- Individualized Prescription of Learning Resources
- Movement toward Responsible Rather Than Acceptable Use Policies
- Conversion to Digital Curriculum
- Cloud Hosted Services
- Virtual and Blended Instruction
- Affordable Mobile Devices
- Ubiquitous Wireless Access

Among these, CCSS, PARCC/SBAC Assessment Reform, Interoperability Standards and RTTT are arguably the most critical. Integration of digital curriculum within the instructional process, virtualized instruction, and equitable distribution of mobile devices and wireless connectivity are also integral if not crucial to an evolving K12. However, these typically operate at a mechanical or process level. Unlike CCSS, PARCC/SBAC, Interoperability standards and RTTT, which require a fundamental change in the way K12 conceptualizes instruction, assessment and the role of district ecosystems in delivery of educational services.

This position paper provides an overview of the opportunity that exists for K12 education to evolve to delivering personalized learning, the pedagogical and technical components required, solutions to overcome barriers to achieving success, and the role of interoperability standards in maximizing K12 expenditures to support instructional reform.

Pedagogical Components of K12 Reform

Obviously, the synergistic pedagogical trends outlined in the introduction are being driven by K12's adoption of the CCSS and the more interdisciplinary and project-based approach to instruction required by that adoption. CCSS are defined in terms of the ability to pragmatically apply academic skills to solve real-world problems within collaborative environments typical of the workplace and college courses. Pedagogy is also being driven by the authentic and performance-based CCSS assessment approach being implemented by SBAC and PARCC (see sample SBAC assessment item Appendix 3). Emerging assessment items and state professional development initiatives have begun to provide a clear consensus regarding the expectations for CCSS instructional reform. Classroom lecture and passive learning, as the dominant instructional modality devoid of social context or opportunity to apply content, will not be a viable part of CCSS adoption.

This evolved pedagogical approach will require K12 to institutionalize provision of adequate time for teaching teams to identify the interdisciplinary content pertinent to a given project-based unit of instruction and to plan engaging and coherent learning environments for delivery of that content. The requisite relief to teachers can be provided through automation of the more labor intensive and repetitive tasks associated with lesson resource location, differentiation of instruction, and formative assessment delivery and analysis. Otherwise, this evolved instructional approach with its concurrent mandates for academic rigor, social relevance, and personalization is more than teachers can be expected to manage.

A hypothetical interdisciplinary/project-based unit that explores the health of the Gulf of Mexico illustrates the organizational, technical, and instructional issues associated with a high fidelity CCSS deployment. In addition to science academic skills, a comprehensive exploration of this topic and completion of any associated projects also requires student mastery and application of math, language arts, and social science skills. However, the interdisciplinary skills requirements of this and other project-based units do not always follow the linear approach to skills mastery stipulated in traditional scope and sequence regimens nor can they make use of their isolated approach to delivery of instruction and teaching assignments.

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[1] Partnership for Assessment of Readiness for College and Careers
[2] Smarter Balance Assessment Consortium
[3] The aggregated technology systems, services, and resources deployed by a district to serve its users

Without permanently assigned teaching teams having representation from all core academic disciplines, the required contextual and pedagogically sound sequencing of academic skills appropriate to project-based topics would be difficult to achieve (and could result in clumsy or ineffective academic skills instruction). Relevance without academic rigor could result. See Graphic I illustrating the incompatibilities associated with an attempt to impose a high fidelity CCSS unit of instruction on top of isolated scope and sequence regimens.

Technical Components of K12 Reform

The technical portion of this synergistic scenario relies heavily on the interoperability of the various components of district ecosystems. These interoperating components have the capacity to provide teachers with the ability to simultaneously search all available learning object repositories (purchased, public domain, local, and cloud-based) in order to assemble appropriate learning resources for use in a project-based unit of instruction.

Gulf of Mexico Project-Based Unit
Inaccessibility issues related to required academic skills

Academic Year Grading Periods	**Math** Scope&Sequence	**Language Arts** Scope&Sequence	**Science** Scope&Sequence	**Social Studies** Scope&Sequence
1st 9 weeks	Math skills taught 1st 9 wks	LA skills taught 1st 9 wks	**Project-based Unit** 1st 9 wks	SS skills taught 1st 9 wks
2nd 9 weeks	Math skills taught 2nd 9 wks	LA skills taught 2nd 9 wks	Sci skills taught 2nd 9 wks	SS skills taught 2nd 9 wks
3rd 9 weeks	Math skills taught 3rd 9 wks	LA skills taught 3rd 9 wks	Sci skills taught 3rd 9 wks	SS skills taught 3rd 9 wks
4th 9 weeks	Math skills taught 4th 9 wks	LA skills taught 4th 9 wks	Sci skills taught 4th 9 wks	SS skills taught 4th 9 wks

Scope & sequence skills taught	9-week periods when the interdisciplinary skills required by the Project-Based Unit are taught (availability not aligned with Project-Based Unit).
Project-based unit taught	9-week period when Project-Based unit is taught and when an interdisciplinary range of skills instruction is required, but is unavailable.

• Interdisciplinary/project-based formative instruction and assessment, remediation, and enrichment processes are unavailable or difficult to deliver when isolated teaching assignments and scope and sequence regimens are operating.

• Permanently assigned interdisciplinary teacher teams will be required to collaboratively identify and appropriately incorporate all grade level academic skills within a year long series of interdisciplinary units if the practical application of academic skills specified in CCSS/PARCC is to be achieved with fidelity.

FIGURE 1 - incompatibilities associated with imposition of a high fidelity CCSS unit of instruction on top of isolated scope and sequence regimens.

Additionally, the district Instructional or Learning Management System (IMS/LMS) will have to provide federated search capabilities to an adequate number of vetted learning and assessment objects for support of project-based unit construction at all grade levels and in all disciplines. Greater detail regarding IMS/LMS functions is provided in subsequent sections and in appendix 4.

Interoperating ecosystem components can also automate delivery of individually prescribed remedial and enrichment resources based on a continuous and transparent formative assessment process. Provision of this level of teacher assistance is essential to the viability of an evolved learning environment. See Figure 2 illustrating the dual instructional preparations required of teachers by a hypothetical CCSS project-based instructional unit (the relative amounts of explicit academic preparation/remediation and contextual instructional activities required to deliver that unit).

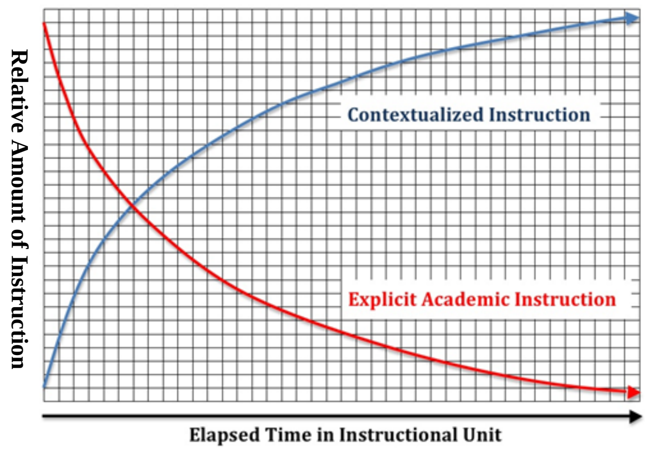

FIGURE 2 - Relative amounts of explicit academic preparation/remediation and contextual instructional activities required to deliver a hypothetical CCSS unit.

K12 stakeholder expectations increasingly include school district ecosystems that provide the same ease of use, personalized resources and ubiquitous access present in private sector ecommerce and social media applications. State and federal RTTT legislation has further emphasized and codified these expectations by mandating an evolved K12 ecosystem that facilitates: adoption of digital curriculum and assessment; analysis of student academic performance, analysis of teacher and administrator professional performance, prescription of individualized learning and professional development resources, and ingestion of public input. Successful delivery of these mandates requires automated data exchange and interoperation among school districts' human resource, finance, student information, learning management, content and Web delivery systems. Many K12 leaders are only beginning to understand and confront the fiscal and human effort required to accomplish these goals.

Simply stated, all standards compliant resources whether assessment items, learning objects, courses, assessment results, demographic data, etc. contain standard descriptive information that allows them to be exchanged, displayed and/or processed when presented to standards compliant applications.

Barriers to Evolving K12 Ecosystems

Unfortunately, districts are faced with a compressed timeline and a constrained planning environment to establish evolved K12 ecosystems. The constraints are being dictated by the brevity of the remaining RTTT funding period and by the limited number of other ecosystem funding scenarios, which are typically subject to brief expenditure and planning windows. These circumstances are compelling many K12 leaders to quickly embrace proprietary solutions in order to establish requisite interoperability and data exchange capabilities. The short-lived expedience of a proprietary approach to develop and deliver a RTTT compliant ecosystem is more than negated by its static and inflexible nature. Proprietary solutions are incapable of efficiently evolving with the inevitable changes in K12 instructional approach, assessment, and governance or with the continuous changes in the landscape of available vendors and products. Any addition or replacement of a component within a proprietary ecosystem will necessarily involve another commitment of fiscal and human resource to re-establish requisite interoperability and data exchange capabilities.

Suppliers that are best positioned to disaggregate and enable interoperable content and services will be at a decided advantage in this K12 market.

Solutions and Rationales for Evolved K12 Ecosystems

There are standards-based approaches to districts' ecosystem interoperability and data exchange capabilities that are far more sustainable and affordable. However, this more rational approach requires cooperation between K12 as an institution and the educational software industry. This collaborative relationship entails development, maintenance and adoption of industry interoperability standards that provide for a common approach to: file format; communication and data exchange; application design; and user management (fortunately there is a non-profit standards organization that facilitates those collaborative processes, IMS Global Learning Consortium at www.imsglobal.org). Simply stated, all standards compliant resources whether assessment items, learning objects, courses, assessment results, demographic data, etc. contain standard descriptive information that allows them to be exchanged, displayed and/or processed when presented to standards compliant applications. Addition or replacement of individual components of a district's ecosystem becomes a modular process when all components are compliant with industry interoperability and data exchange standards. Each component is inherently capable of working with the others without the need to commit fiscal and human resources to create a custom interface between or among proprietary resources and/or applications.

Pressures on K12 to adopt digital curriculum, comply with accountability and reporting requirements, and reduce costs are driving expectations for the elimination of isolated silos of proprietary data, content and functions.

Adoption of interoperability standards is not an all or nothing proposition for districts. Inclusion of requirements in RFPs and contracts for software products to become compliant with interoperability standards by a date certain is a viable starting place. Inquiring about interoperability compliance in initial vendor negotiations is also helpful. These strategies often result in discovery that a product is already compliant with interoperability standards in some areas and the vendor is willing to pursue further compliance as part of a purchase agreement. Any relief from the effort required to sustain proprietary ecosystems is a positive step.

Districts can leverage the fact that vendors (developers of educational software, digital content, online services, etc.) also benefit from adoption of interoperability standards. Neither districts nor vendors benefit from the need to continuously write and rewrite interfaces in order to integrate a new product within an array of proprietary products comprising district ecosystems. Pressures on K12 to adopt digital curriculum, comply with accountability and reporting requirements, and reduce costs are driving expectations for the elimination of isolated silos of proprietary data, content and functions. Given this demand for delivery of more sophisticated services on continuously reduced budgets, districts have no choice but to demand standards-based interoperability and data exchange in products they purchase. Districts require the ability to mix best of breed products to create ecosystems that: comply with the mandates of RTTT and CCSS; implement and leverage other legislative, pedagogical, and technical trends; and address expectations for private sector-like interfaces and functions. Suppliers that are best positioned to disaggregate and enable interoperable content and services will be at a decided advantage in this K12 market.

Crucial Role of Interoperability Standards in Evolving K12

A typical scenario in which adoption of interoperability standards would be advantageous to a district might involve purchase of an Instructional or Learning Management System (IMS/LMS) for use in managing instructional and assessment content from several suppliers. The newly acquired IMS/LMS would also be required to communicate and exchange data with existing Student Information, Human Resource, Finance and Professional Development Systems. The combined utility of these systems, if interoperating efficiently, could deliver all of the mandated RTTT educational ecosystem functions and enable the evolved instruction and assessment prescribed by CCSS. The germane standards that facilitate the required interoperability, communication and data exchange among these systems and resources are specified in Figure 3.

Ultimately, pursuit of interoperability in ecosystems must impact the core competency of K12 by empowering teachers to deliver more efficient and effective instruction.

Ultimately, pursuit of interoperability in ecosystems must impact the core competency of K12 by empowering teachers to deliver more efficient and effective instruction. An evolved K12 has profound implications regarding the technology services that must be delivered to students and teachers. Perhaps most critical for teachers are the capacities to: single sign-on to all instructional and assessment content repositories; simultaneously search all repositories for formative, remedial, and enrichment content pertinent to specific interdisciplinary topics; and individually assign content based on formative assessment.

Absence of these functions will drastically reduce assistance to teachers regarding lesson resource location, differentiation of instruction and formative assessment. This situation would render demands for instruction that is academically rigorous, relevant, and personalized unreasonably burdensome to produce.

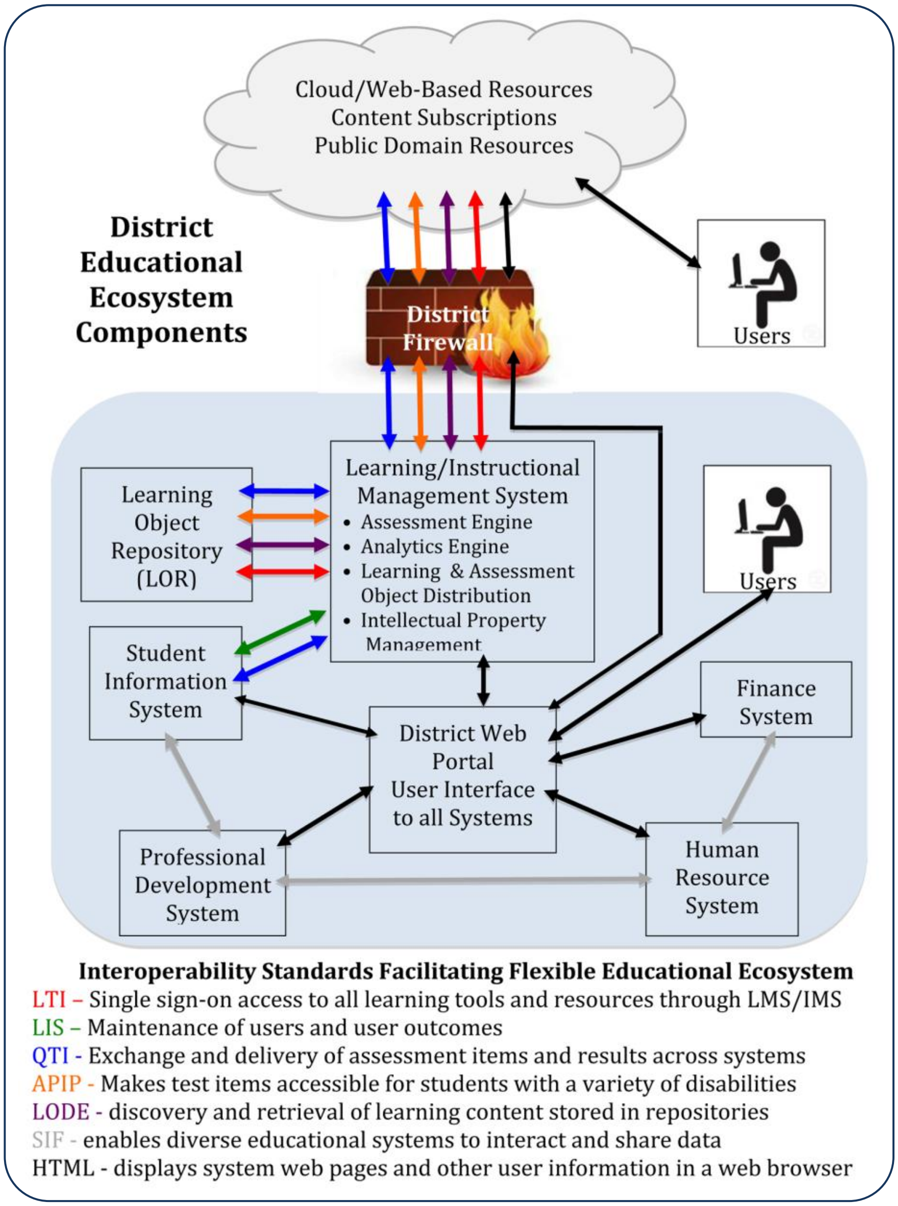

FIGURE 3 - Germane standards that facilitate the required interoperability, communication and data exchange to attain RTTT/CCSS compliance.

Confluence of Pedagogy and Technology

A CCSS instructional environment, which stipulates acquisition of college and career skills through contextual application of academic content to solve problems, is most succinctly termed constructivist. Constructivism is generally accepted as a learning process that allows a student to directly experience and act upon an environment in order to acquire and test new knowledge. This situation should be reassuring to most K12 leaders since constructivism is central to the learning theories of Piaget, Dewey and Montessori (common pedagogical reading requirements in most professional preparation regimens). However, constructivism is far removed from the instruction provided by much of K12 (lecture driven, socially isolated, and emphasizing memorization - ostensibly to prepare students for high-stakes testing). Given national K12 data, few would argue for the effectiveness of this approach. True K12 instructional innovation will have to be deliberate in its embrace of the inherent constructivist tenets of CCSS, the capabilities of interoperable K12 ecosystems and other current educational trends that will make substantive reform tenable. See appendix 1.

There is a serendipitous confluence of interoperable K12 ecosystem capabilities and CCSS learning theory requirements that will facilitate delivery of critical assistance to teachers and rich learning environments to students. An interoperable K12 ecosystem can enable use of mobile devices to create interactive instructional environments and to transparently embed formative assessment processes within instruction to inform the assignment of personalized digital content. These interactive instructional environments will be dominated by active/performance based instruction requiring student interfaces that will transition from laptops to personal communication devices (tablets, smart phones, etc.). Students will use their mobile devices to provide input regarding the strategies, academic content and formula, and calculation results they employ to solve interdisciplinary project-based problems or to reach and present conclusions regarding interdisciplinary project-based issue exploration. Teachers will use a mobile device to continuously record the effectiveness with which students collaboratively apply academic content and formula to solve the problems or address the issues contained within the interdisciplinary project based events. This converged approach to instruction and assessment can be accomplished synchronously through use of real time rubric driven observations and asynchronously through a digital journal process that includes requirements for extended expository responses, completion of academic assessment items, and upload of digital artifacts. A continuous and transparent flow of formative data would inform the individualized prescription of remedial and enrichment resources to students.

The combined impact of a high fidelity implementation of CCSS pedagogy and PARCC/SBAC assessment approaches and deployment of interoperable K12 ecosystems could actually relieve teachers of the burden of continuously halting instruction to administer formal and disruptive formative assessments. See Figure 4 illustrating use of interoperating systems, learning and assessment objects, and assessment and analytics engines to accomplish personalized/closed loop learning. See Appendix 2 for a detailed description of a CCSS digital journal process.

All the components of substantive instructional reform are staged; however, the window of opportunity is limited.

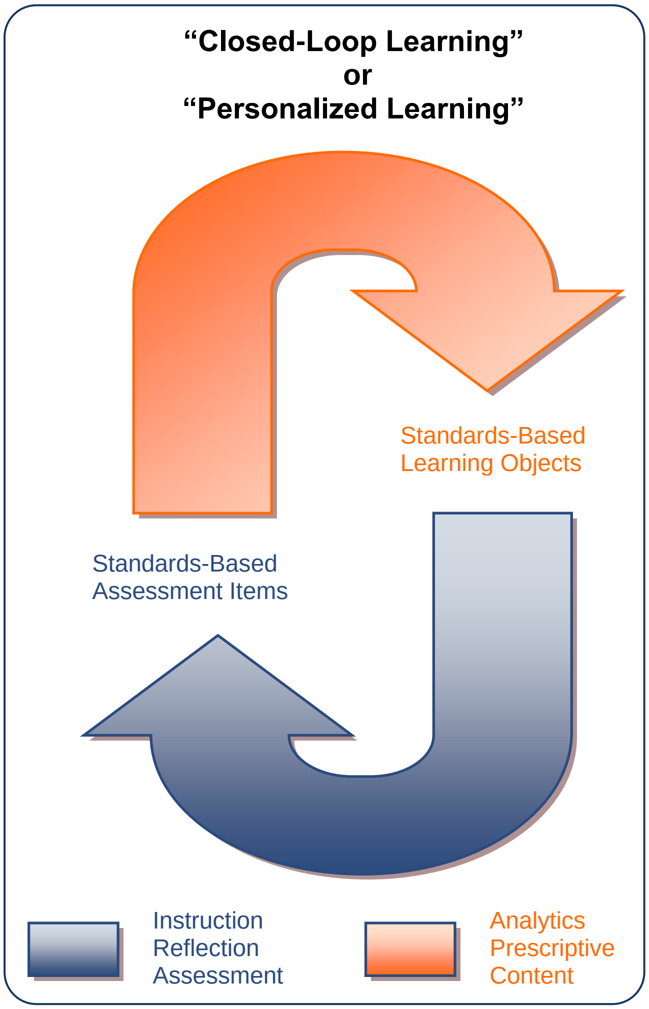

Figure 4 - Use of interoperating systems, learning and assessment objects, and assessment and analytics engines to accomplish closed loop/personalized learning.

TOP FIVE TAKEAWAYS

1. A rare alignment of the legislative, pedagogical and technology trends currently impacting education is providing an opportunity to dramatically and positively evolve K12 education. This synergetic scenario is largely being driven by K12's adoption of Common Core State Standards. Unfortunately, the reality today is that this evolved instructional approach is more than teachers can be expected to manage because proprietary digital content and technology resources do not easily integrate.

2. Pressures on K12 to adopt digital curriculum, comply with accountability and reporting requirements, and reduce costs are driving expectations for the elimination of isolated silos of proprietary data, content and functions.

3. Faced with a compressed timelines and constrained funding, K12 leaders are compelled to quickly embrace proprietary solutions that are static and inflexible in order to establish requisite interoperability and data exchange capabilities. Unfortunately, closed proprietary solutions are not sustainable or scalable, requiring costly, custom integrations as new systems are added to a district's technology ecosystem.

4. Districts would benefit greatly by pursuing a more rational and affordable standards-based approach to improving interoperability and data exchange capabilities. IMS Global Learning Consortium, a non-profit standards organization, is currently facilitating collaboration with leading K12 districts and the educational software industry to develop, maintain and adopt interoperable technical standards that provide a common approach for the exchange of data between applications.

5. Putting in place a next generation, interoperable digital learning ecosystem is key to positively impacting the core competency of K12 by empowering teachers to be more efficient and effective in delivering "closed-loop learning" or "personalized instruction."

About IMS Global Learning Consortium

IMS Global is a nonprofit organization that advances technology that can affordably scale and improve educational participation and attainment. IMS members are leading suppliers, institutions and government organizations that are enabling the future of education by collaborating on interoperability and adoption initiatives. IMS sponsors Learning Impact: A global awards program & conference to recognize the impact of innovative technology on educational access, affordability, and quality. For more information visit www.imsglobal.org or contact info@imsglobal.org.

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Appendix 1

- **Common Core State Standards (CCSS)** – Academic standards described in terms of the student's ability to pragmatically apply academic skills to solve real-world problems

- **PARCC/SBAC Assessment Reforms** – Guidelines for districts to implement instructional and assessment reform that emphasizes performance-based curriculum and mastery measurement based on pragmatic interdisciplinary application of academic skills to solve real-world problems (college and career readiness)

- **Ecosystem Interoperability Standards** – Standardized data and content exchange methods, file formats and application designs that will enable districts to deploy educational eco-systems with the interoperability, automated functions, and efficiencies necessary to comply with RTTT mandates

- **Race to the Top (RTTT) Educational Ecosystems** – Specifications for a comprehensive interoperating educational eco-system of curriculum management, assessment, and professional development applications

- **Individualized Prescription of Learning Resources** – resulting from business intelligence to automatically infer a continuous flow of appropriate remedial digital resources for individual students based on formative assessment results, required relief for teachers if they are to deliver high fidelity CCSS instruction

- **Movement toward Responsible rather than Acceptable Use Policies** – Enables use of public and moderated forums by students and teachers to synchronously and asynchronously collaborate and exchange information to solve problems and discuss issues using academic content contextually

- **Conversion to Digital Curriculum** – Instructional resources that can be automatically queried and assigned using extensive meta data sets including academic standards, academic deficiencies, thematic or interdisciplinary topic, grade and proficiency levels, exceptionalities and accommodations, etc.

- **Cloud Hosted Services** – ubiquitously accessible Web-delivered educational resources and services ideally suited to the application integration, data and information exchange, and automated prescription and delivery of educational resources within a RTTT educational eco-system

- **Virtual and Blended Instruction** – Web-delivered learning environment ideally suited to collaborative learning, individualized academic standards remediation or enrichment, interaction with experts and resources outside the instructional environment, and integration within a RTTT educational eco-system

- **Affordable Mobile Devices** – enables flexibility regarding the time and location of the learning environment and facilitates a continuous flow of formative assessment data resulting from student participation in collaborative problem solving activities, explicit standards mastery exercises, and other activities where the student input and responses can be written to a student record data base through a mobile device

- **Ubiquitous Wireless Access** – ubiquitous access to all RTTT educational ecosystem resources through use of affordable mobile devices in school and in all other appropriate learning environments

Appendix 2

Digital Journal as Instructional and Formative Assessment Approach

Constructivist learning environments require frequent opportunities for students to apply academic content to solve problems and to reflect on their experiences while applying that content. This reflective or journal writing process can be accomplished through a digital journal interface used to gather formative assessment information pertaining to participation in project-based learning activities. Journal information/formative assessment data can then be distributed to appropriate systems and personnel for remediation, enrichment, intervention and feedback.

Information submitted through the Digital Journal

An example of the information types to be gathered through student journal entries is provided below.

- Text - Extended response/reflection using a variety of writing types (expository, narrative, comparative, persuasive, analytic, etc.) to describe meta cognitive, knowledge construction and deconstruction, self actualization, and academic content application processes required to successfully engage in a specific project-based learning activity:
  - What did my group and I have to think about, discuss and understand before we could begin planning our project?
  - What new knowledge did my group and I consider and use when working on our project and how did our approach to working on our project change as a result of the new knowledge we had obtained?
  - How have my abilities and how I think of myself changed as a result of the new knowledge and experiences I acquired during completion of the group project?
  - Describe how your group used a new (math, science, social studies, language arts, fine arts) skill or concept to solve a problem or understand an issue related to completion of your project.
- Academic Mastery Data – Formative assessment data addressing the student mastery level of the academic skills and content required to successfully engage in a specific project-based learning topic (prefaced with language explaining that these questions will ask you to apply skills/knowledge you have already applied to your projects but used in a different problem solving context):
  - Academic mastery assessment items covering pertinent skills and information students have used to this point.
- Digital artifacts produced during in the project based learning activities.

Teacher Interface for Creating Digital Journals

An intuitive journal creation interface will enable teachers to quickly create the prompts, assembled academic mastery assessment items, and upload links students will see when completing their journal entries. Teachers will also be enabled to provide information to the LMS/IMS and other interoperating ecosystem components (such as the Student Information System) to be used in the automated assembly of the Digital Journal student interface. This process ultimately results in automatic forwarding of formative assessment information to analytics engines, essay scoring engines, and learning object repositories to facilitate the identification of individually appropriate remedial and enrichment resources. An example of the information types to be entered through the journal creation interface is provided below.

- Project topic
- Participating students (for inference of classes, schedules, identity from interoperating ecosystem)

- Academic standards required to successfully engage in the project-based learning topic (for automated insertion of academic assessment items for formative assessment and identification of individually appropriate remedial and enrichment resources through the interoperating ecosystem)
- Required areas of extended response and reflection
- Links to digital artifacts upload directory

Application of Digital Journal Responses

Examples of the use of the information provided by student journal entries are included below.

- Teacher use of rubric driven assessment of student extended response/reflection portions of the digital journal and placement of the text artifact and scored rubric in student portfolio, individualized and group feedback as warranted
- Submission of student extended response/reflection portions of the digital journal to AES engine
- Submission of Student formative assessment data to IMS/LMS analytics engine
- Automated prescription of remedial or enrichment learning objects based on results of formative assessment items and AES and placement of these learning objects in individual student IMS/LMS account assignment/play list, mastery monitored through formative assessment reports/charts, individualized and group feedback as warranted
- Placement of student digital projects/artifacts (presentations, graphics, multimedia, etc.) in student portfolio, individualized and group feedback as warranted

Cyclical Nature of the Journal Entry Process

The teacher interface is used periodically to create the next iteration of the Digital Journal and the process is repeated appropriately for the duration of the project-based instructional unit. Closed Loop or Personalized Learning is accomplished transparently to the instructional process. See Graphic 4 illustrating use of interoperating systems, learning and assessment objects, and assessment and analytics engines to accomplish personalized/closed loop learning.

Appendix 3

Below is an excerpt of a sample SBAC assessment item. To see the complete sample, you can download it here: www.imsglobal.org/articles/SBACSampleItem102212.pdf

ELA Grade 6 Draft Sample PT Item Form
C3 T1, T3, T4 And C4 T2, T3, T4

ELA.6.PT.3.03.083 C3 T1, T3, T4 And C4 T2, T3, T4

Sample Item ID:	**ELA.6.PT.3.03.083**
Title:	Young Wonders
Grade/Model:	6 /1
Claim(s):	**Primary Claims** Claim 3: Students can employ effective speaking and listening skills for a range of purposes and audiences. Claim 4: Students can engage in research/inquiry to investigate topics and to analyze, integrate, and present information.
Primary Target(s):	*These claims and targets will be measured by scorable evidence collected.* **Claim 3** **1. LANGUAGE & VOCABULARY USE:** Strategically use precise language (including academic and domain-specific vocabulary), figurative language, syntax, grammar, and discourse appropriate to the intent, purpose, and audience when speaking. **3. PLAN/SPEAK/PRESENT:** Gather and organize information, compose, and orally deliver short (e.g., summaries) and longer (presentations) for different purposes and audiences, drawing from a range of digital media to enhance the message or intent **4. LISTEN/INTERPRET:** Analyze, interpret, and use information delivered orally or visually **Claim 4** **2. ANALYZE/INTEGRATE INFORMATION:** Gather, analyze, and integrate multiple sources of information/evidence to support a presentation on a topic **3. EVALUATE INFORMATION/SOURCES:** Evaluate relevancy, accuracy, and completeness of information from multiple sources **4. USE EVIDENCE:** Generate a claim or a main idea and cite evidence to support arguments or conjectures
Secondary Target(s):	**n/a**
Standard(s):	**Primary Standards** **Speaking & Listening** SL-1, SL-2, SL-3, SL-4, SL-5, SL-6, L-1, L-3a, L-6 **Research** R-1, R-9, RLiteracy-1, RH and RST 1-3 and 7-9 W-1a, W-1b, W-8, W-9, WLiteracy 8, WLiteracy 9
DOK:	4
Difficulty:	Medium
Score Points:	TBD
Task Source:	Testing Contractor

How this task contributes to the sufficient evidence for the claims:	In order to complete the performance task, students 1. Make inferences and summarize using key details in text. 2. Analyze information presented in multiple texts. 3. Analyze information delivered orally and visually. 4. Conduct short research on a topic, analyze and interpret the information, and cite evidence about how it supports a concept. 5. Organize, compose, and deliver oral presentations using precise language appropriate to purpose and audience. 6. Use visual or audio information to enhance oral presentations.
Item type:	PT
Target-specific attributes (e.g., accessibility issues):	Students with visual and hearing impairments may require alternative formats of the information presented. Students with speaking impairments may require alternative options for presenting their speeches.
Stimuli:	**Sources** **A simulated dictionary website** **Three websites about young people:** http://www.hickoksports.com/history/worldsnowb.shtml http://news.discovery.com/human/genius-great-111101.html http://myhero.com/go/directory/page.asp?dir=child **Video: Mikey Carraway** http://www.cnn.com/2012/01/04/living/cnnheroes-young-wonders/index.html Mikey Carraway champions organ donation while feeding the homeless in Oakland, CA (1:10) **A student-selected article** from a website of students' choosing (may use suggested option: http://myhero.com/go/directory/page.asp?dir=child) **Interview** Ana Dodson raises money for Peruvian orphans http://www.girlshealth.gov/spotlight/2008/2008.01.cfm **Ana Dodson** **A giving heart** Ana was adopted when she was a little baby, but she always dreamed of returning to the country she was born in. When she visited a Peruvian orphanage 4 years ago, she saw how the children were not as fortunate as she was and she decided to make it her mission to help them. Read about her story, about her trip to Peru, and how she opened her heart to give back to the place she once called home. **How old are you?** I am 15 years old. **What grade are you in?** I am in 10th grade.

To see the complete SBAC sample assessment form, you can download it here: www.imsglobal.org/articles/SBACSampleItem102212.pdf

Appendix 4

Instructional or Learning Management System (IMS/LMS) federated search capabilities

The district Instructional or Learning Management System (IMS/LMS) will have to provide access to an adequate number of vetted and interoperating learning and assessment objects/resources (both purchased and public domain) for support of project-based unit construction at all grade levels and in all disciplines. There also will be a required LMS/IMS federated search capability that facilitates use of any combination of grade level, reading level, academic benchmark, content area, interdisciplinary topic and other search criteria helpful in designing and delivering CCSS instruction. This federated search process could be manually initiated by teachers during construction of project-based units, but would require automation as the unit transpires in order to relieve teachers of the continuous tasks associated with location and assignment of remedial/enrichment resources based on formative assessment results.