

# Summary of the Regional P-12 Summit on Virtual Education

Hosted by the New England and New York Comprehensive Centers

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*April 26 – 27, 2011*



## I. Introduction

*The Regional P-12 Summit on Virtual Education, cosponsored by the New England and New York Comprehensive Centers, held in Boston, Massachusetts on April 26-27, 2011, was designed to assist education leaders in:*

- a) Understanding the landscape of P-12 virtual education in the Northeast;*
- b) Utilizing key, current national research on P-12 virtual education policy and practice;*
- c) Identifying and capitalizing on opportunities for cross-state and in-state collaboration; and*
- d) Developing leveraged actions to support statewide P-12 virtual education policy and programs for all students.*

Participants in the Regional P-12 Summit on Virtual Education came together to discuss emergent strategies to address the need for a measured approach to state-level virtual education policies and programs. Notes taken by New England Comprehensive Center (NECC) and New York Comprehensive Center (NYCC) staff over the course of the Summit were analyzed and a representative summary of the topics covered is provided below, organized according to the TPAC Framework.

## II. The TPAC Framework

Online learning cannot exist in a vacuum. The implementation of virtual education must involve a system-wide approach by all state stakeholders that integrates current educational initiatives in a cost-effective and forward-thinking way. Susan Patrick, CEO of iNACOL and a presenter at the Summit, has developed a framework for online and blended learning detailing the fundamental elements of an approach to systemic educational transformation (Wicks, 2010).

- “T” for *technology platform and tools* to teach, network, collaborate, and communicate;
- “P” for *people, professional development, and pedagogical shift* toward student-centered learning using technology, data to inform instruction, and engaging digital content;
- “A” for *assessment methods* that demonstrate a student’s proficiency in knowledge, including adaptive and performance-based assessments that are data-driven, for improving and personalizing instruction; and
- “C” is for *digital content and curriculum*, including adaptive content.

The following summary of Summit proceedings are structured using this Framework as an organizing principle to share overarching themes gleaned from the Summit.

### III. Technology and Tools

#### *Cost*

A natural constraint on the ability of states to implement broad-based virtual education is the often-prohibitive cost associated with new technologies. Maine successfully leveraged the RFP process to engage the business community in finding the most cost-effective procurement strategies for districts. A representative from that state was vocal in urging other states to do the same, noting, “The states’ best friend is the RFP.” The issue of cost was woven throughout the Summit, and was a particular concern when technology and tools were discussed. Indeed, cost continues to play a large role in the types of technologies used in virtual education.

#### *Access*

Participants noted that stakeholder access, through broadband connectivity or the provision of mobile devices, is essential given the need for Internet connectivity for full engagement in virtual education courses. Since states are tasked with providing educational opportunities to all students, they must consider how to deliver those opportunities equitably. Here, too, states can leverage their scale to bargain on behalf of local districts to receive the broadband connectivity or mobile devices they might not otherwise be able to afford.

A number of strategies can be used to enable broad access to virtual education, including:

- *Using the browser as the focal point of development*  
Once broadband connectivity is ensured, the web browser can be used almost anywhere, and is one of the most universal technologies on the market. Therefore, web-based virtual education platforms that leverage the browser can often cover the broadest user base with the least amount of overhead.
- *Allowing students to bring and use their own devices in school*  
As more and more students gain access to mobile devices and laptops, a cost-effective way to engage students in virtual education is to allow them to use their own devices rather than forcing the district to purchase and maintain hardware in bulk. Students are often more comfortable with their own hardware than they are with a new device, and, if students use their own devices to access virtual education, states may be able to mitigate the costs associated with security and device repair or replacement. On the other hand, if students are expected to use only their

own devices, this raises equity issues that must be addressed, perhaps by maintaining a smaller fleet of hardware for student use.

- *Reducing the purchase of software licenses to bring costs down: leverage open source*

Bulk software licenses are expensive, and many free and open alternatives to popular software are available. Open source tools are discussed in detail below.

### *Open Source*

Owing to both budget constraints and availability, many of the technologies being used at the state level are open source, which are available to be used and modified freely. A majority of the Summit participants reported that they are using Moodle as a platform—that does not mean that Moodle is the only platform to use for online learning, but because it is so cost effective it seems to have become a preferred platform in the field. “Platform” is defined here as a way for teachers to organize their curricula and set up the online classroom, and for students to access course materials, forums, and any other course resources provided or required by the teacher.

Many of the educational resources released online are under Creative Commons Licensing, which means they can be used without cost and modified, as necessary.

The Creative Commons License is provided in an easy-to-understand, plain-English format so that users can comprehend what they are committing to when they release resources under the license. The most common and most universal license available is the “Attribution” license, which lets others distribute, remix, tweak, and build upon work, even commercially, as long as credit is given for the original creation. The Attribution license is recommended for maximum dissemination and use of licensed materials.

### *Rapid Prototyping*

Because of the recurring reference throughout the Summit to the dearth of research on virtual education, some Summit participants recommended that research techniques incorporate data-driven rapid prototyping of virtual education tools. Such techniques involve embedding data collection functionalities, reporting capabilities, and experimentation techniques into virtual education tools to allow researchers and product developers to quickly iterate through new versions of these tools, enabling research-based progress toward more educationally effective virtual education.

### *Interoperability*

Interoperability among the different emerging technologies is essential to ensure that whatever systems are put into place can “talk” to other systems, on a local, state-based, regional and national level, especially given the move toward national

sets of standards like the Common Core. The federal government is currently working on unified protocols for technologies (such as standardized data formats), and this will allow states to be comfortable in the knowledge that the technologies they are implementing will not become quickly obsolete.

#### **IV. People, Professional Development, and Pedagogical Shift**

##### *Professional Development and Training*

Most of the online teachers discussed at the Summit received rigorous training to use their skills in an online environment. For example, a virtual school in New Hampshire uses a multi-day training process specifically to “weed out” those teachers who realize that they may not be “cut out” for conducting classes virtually. Virtual education certainly affords teachers and students more flexibility to complete work and conduct classes at non-traditional times, but participants agreed that virtual education requires teachers to have an abundance of discipline in order to keep their classes running smoothly.

According to one Summit presenter, the general characteristics of successful online teachers are as follows:

- They tend to be experienced
- They are well-organized
- They are looking for new experiences
- They play many roles
- They want control and want to take ownership of their classroom
- They see their courses and pedagogy as works in progress

As is evident from the list above, the characteristics of successful online teachers are similar to those of traditionally effective brick-and-mortar teachers. Correspondingly, many best practices in terms of professional development also apply to both online and face-to-face instruction. Summit participants supported a potential future initiative to establish connected online communities of practice to share experiences in virtual education.

Currently, teacher pre-service programs are “hit or miss” with respect to preparing teachers to work in the online world. Summit participants by and large agreed that there should not be a separate certification for virtual education teachers—rather, virtual education should be a part of all certifications, as teachers will have to increasingly deal with virtual education as time goes on.

##### *Brick-and-Mortar Uptake*

Traditional faculty and staff are often wary of virtual education and tend to see it as a threat. It seems to help when virtual school representatives, in their interactions

with brick-and-mortar schools, demonstrate that their purpose is to cooperate with brick-and-mortar schools and teachers, and not to displace them.

According to multiple presenters, several conditions are necessary in order to successfully promote or implement virtual education in one's own school district:

- Visionary leadership that understands the urgency and the need for virtual education—it is important to build capacity at the superintendent and principal levels to support online learning in this manner;
- A full-time coordinator of virtual programs;
- Virtual teams to champion and evangelize for virtual education; and
- A good working relationship with the state to navigate the emerging policy terrain.

### *Virtual Pedagogy*

Many sound pedagogical principles in traditional environments also work in online environments. For example, Summit participants noted it was helpful to establish clear expectations for students throughout virtual education courses.

Additionally, participants found that online and blended teachers are successful when they see virtual education as another tool with which to engage students. Indeed, many participants said that it is essential to design virtual education courses around student engagement, since student engagement is such an important step in ensuring that students learn the material.

It was noted, however, that teachers in online environments may struggle with things such as presence, as it is difficult to replicate the nuance and immediacy of communication and feedback that is central to a face-to-face course.

### *Personalized Instruction*

Participants felt that there is a huge opportunity for personalization of instruction using virtual education in order to meet the diverse needs of students. For example, participants reported that some teachers interacted with students on a more personal level more frequently than in a traditional classroom because some students feel more comfortable to speak (or type) their mind or otherwise participate in an online environment.

However, accommodations for students, broadly speaking, with special needs in virtual education have not yet been fully addressed at a policy level. These students should be provided the necessary accommodations so that they can fully engage in virtual education. Currently, the needs of these students are addressed largely on a case-by-case basis. For example, some participants noted that students with medical conditions, such as those with fragile immune systems, might be better served in a virtual education setting than in a traditional setting.

Universal Design for Learning (UDL), referenced by a Summit presenter, is an instructional design strategy that guides how environments can be optimized for access. UDL can help instructional designers provide multiple opportunities for creative student output in response to course lessons and assignments, such that students can use the method of learning that best suits their needs.

## **V. Assessment Methods**

### *Similarities to Traditional Assessment*

Depending on the course, online assessment can take a variety of forms. In many cases, assessment done online looks much like it would in a traditional course. For example, students can still submit essays online much as they would in person. They can take multiple-choice tests and even open-response tests online, depending on the technologies being used, and they can submit portfolios of their work.

However, difficulties arise when trying to grade class participation and other “intangible” variables. A participant shared that one way to grade something like class participation is to evaluate the quality of contributions to a required online discussion forum, and assign points to students accordingly.

### *Big Data and Game-Based Learning*

Participants noted that we are in an era of “Big Data,” which suggests that there are numerous ways to capture and measure many of the things we do. For example, we can begin to analyze game-based learning using built-in electronic data capture for assessment. One presenter shared that scientists have found that the processes used during gaming are mentally similar to those used in science. Similarly, we can embed data capture in virtual education platforms to gather student information that was previously more difficult to obtain, such as precise measures of time-on-task for given activities.

Unfortunately, as participants noted, there is a crucial difference between valid psychometric data and data that can lead to useful, actionable student feedback, suggesting that most of the data gathered will not be as reliable as the data derived from a large-scale assessment. However, these data can still be used to inform instructional strategies.

Participants agreed that it would be valuable to establish best practices for gathering and using data in order to protect the students in question.

### *Formative Assessment*

Participants felt that teachers have the opportunity to leverage the tools available through virtual education platforms to more fully incorporate formative assessment into their instructional practices. There is an abundance of data produced as an outgrowth of virtual education, such as data about time-on-task or from brief

assignments or quizzes. These data can be easier to aggregate, visualize, and digest using virtual education platform tools, and can thus be more quickly integrated into pedagogical strategies.

Two consortia funded by Race to the Top, Partnership for Assessment of Readiness for College and Careers (PARCC) and the SMARTER Balanced Assessment Consortium (SBAC), have the potential to help teachers conduct formative assessments, since “With few exceptions, the assessments, including many of the performance tasks, will be delivered and scored using computer and online resources, which will increase overall system functionality and dramatically reduce the amount of time that schools and teachers must wait for student achievement and growth data” (Center for K-12 Assessment & Performance Management, 2011).

## **VI. Content and Curriculum**

### *Types of Online Courses*

Many of the participants found that the absence of certain content at their schools helped drive the adoption of virtual education. This includes advanced AP courses, courses in different languages, and/or esoteric subjects in which students were interested. Some virtual schools allow for experiential learning opportunities as well.

### *Content Quality*

Many participants have experienced virtual education courses that were not up to the highest standards, and the quality of online courses appears to be in question. Possible reasons for this include the high cost of curriculum development and the lack of training in using free and open resources.

Participants were therefore in favor of quality controls and a process for establishing best practices for creating engaging virtual education courses. Some participants noted that iNACOL provides standards for quality online courses, teaching, and programs, and these can serve as a starting point for virtual educators. In order to ease concerns about the quality of virtual education courses, some participants found it helpful to get superintendents to endorse courses themselves, so that schools and teachers feel comfortable that they won’t be reprimanded in the future for using them.

### *Competency-Based Progression*

Participants felt that virtual education can act as a gateway for the implementation competency-based curricular pathways. Competency-based pathways represent one of the major promises of virtual education—they can allow students individualized learning to the extent that they can proceed at their own pace. If educators have a “map” of competency-based progressions, they will be able to readily monitor student progress and provide timely interventions to get students back on track, if necessary, or deliver enrichment opportunities, as needed. Ultimately, virtual

education can allow educators to move beyond the constraints of seat time, enabling students to achieve mastery of course content at a level commensurate with college and/or career readiness.

One virtual school participating in the Summit shared that students who do not demonstrate the requisite maturity level to actively engage in a course are asked to un-enroll until they are ready to reengage in the online learning experience. It is therefore important for educators to realize that not everyone may succeed in a virtual education environment—and that this does not represent a failure on the student or the instructor’s part. On the other hand, through their online courses, students can learn to be organized and independent learners. There is therefore also a need to be cautious about the possibility of screening out students who don’t have these skills before they enter an online program.

## **VII. The Challenge Ahead**

Recent advances in Internet-based, open, and mobile technologies hold some promise in meeting the ever-growing demands of the P-12 educational marketplace, but there is still policy development to be done to allow for flexibility and innovation in integrating these new technologies into current educational frameworks in a way that deeply engages students in learning, expands educational opportunities, and aligns student outcomes to the demands of the 21<sup>st</sup> Century. However, the research base has not yet caught up to the utilization of these innovations. One Summit presenter recommended that policymakers searching for clear prescriptions from the research must instead proceed based on the finding that the delivery of virtual education does no harm to students—essentially, student outcomes in virtual education are no better and no worse than in the traditional brick-and-mortar classroom (Means, Toyama, Murphy, Bakia, & Jones, 2010).

Given the current economic climate, the promise of increased student engagement and achievement, and the inexorable march of technology, policymakers have been compelled to address virtual education as a state policy issue. The questions that need to be addressed are how best to employ virtual education in the service of students, and how states can work within existing policy frameworks and promulgate policies to further student learning.

## References

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