

New York State Online Learning Advisory Council's Report to New York's Governor, Legislature, and Commissioner of Education

Final Report -- Findings and Recommendations

November 12, 2015

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Executive Summary

The Online Advisory Council

In December 2014 a statute co-sponsored by Senator Young and Assemblywoman Nolan was approved that required the Commissioner of Education to establish a temporary Online Learning Advisory Council to develop recommendations to advance online and blended learning in New York State. The Council was assigned to make recommendations by October 1, 2015, which would include, but not be limited to, the following:

1. Guidance for use of a statewide online and blended learning network;
2. Best practices and model school district policies to inform implementation of an online and blended learning program, including broadband access;
3. Academic programming suited for online and blended learning;
4. Partnerships with institutions of higher education and other relevant stakeholders for workforce opportunities using online and blended learning; and
5. A review of teaching and professional development policies and practices.

This executive summary provides current context for online learning in New York State, a vision for the future of online learning for our students, teachers, and school leaders, and concludes with four significant recommendations from the Council for policymakers and lawmakers. The full report provides more depth and explanation, and represents the work of the Council along with additional recommendations specific to each of the five areas above.

Online Learning in New York State

The members of the Council believe New York State's PK--12 education system must provide equitable access to online course programs and online tools to deepen student learning in our classrooms. Our schools have an important responsibility to help young people make sense not only of their face--to--face world, but the digital world in which they live as well. Students today are creating online lives and identities, and schools too often leave students to mediate these online identities without support and guidance. Students without online learning experiences and supports for their digital citizenship lose important access to new learning experiences, and also miss opportunities to deepen the relevance and personalization of their learning. While there are significant examples of progress in many classrooms in New York State, taken as a whole, schools can and must do better for our children.

There are, however, encouraging opportunities to create access to new online learning experiences and to create a digital transformation with online learning tools in New York State classrooms. In fact, New York State faces an unprecedented opportunity to

advance online learning in its schools, and also to advance educational technology more broadly, with the investment of \$2 billion in the Smart Schools Bond Act authorized by the legislature and Governor, and approved by voters in November of 2014. However, crucial professional development costs are not eligible for funding under this program. If New York’s policymakers and lawmakers wish to advance online learning experiences for children, it is critical that this investment be leveraged to ensure that not only hardware and broadband connectivity are addressed, but teachers and school leaders are also developed to ensure that practices evolve, instructional resources are used effectively, and practices are sufficiently supported so as to be sustainable.

Moreover, many promising examples and models of online teaching and learning exist in New York State schools. Online learning can provide equitable access for Advanced Placement courses and other coursework, and these programs can serve children in rural, suburban, and urban systems. The most effective development of online learning programs and digital transformation of classroom practices using online tools come not from a statewide deployment of a single program, but through careful and inclusive system-wide planning between administration and teachers. We envision a blend of “bottom- up” innovation with “top-down” communication, leadership, and support.

It should be noted that online learning is a relatively new educational field that needs to continue to be explored and researched. We have anecdotal data, but few large- scale studies exist on the effectiveness of PK-12 online programs and learning tools. We believe that effective systems make a commitment to high quality professional development and support for teacher- developed innovations in practice and online courses, but also commit to evaluation and research to know and understand the effectiveness of these efforts.

Expectations

For students:

Students should seek ways to connect their digital lives with their face--to--face learning in schools. They cannot do this alone. They need support, resources, and equitable access to tools, devices, and internet connectivity (at home and at school) and learning experiences embedded in their school studies. They also need adult educators who have learned about online learning environments to facilitate student growth and learning. They need adult educators willing to take risks to bridge students’ digital lives

-- to make the work of schools relevant to the digital lives students will face in their college and career experiences in their future.

Like character education in the face--to--face classroom, students need well--informed

adult models, and they need to be engaged in the development of clear expectations for good citizenship in the digital sphere. This is more than a list of do's and don'ts.

Students need to take ownership of these new responsibilities as citizens of a new digital age -- responsibilities that the adult world has yet to come to terms with. Major issues include ethics, data privacy, reliability and motivation of internet content creation, and other matters. Kentucky's Department of Education established a Digital Driver's License in 2011 for this purpose -- an online learning experience designed to provide students with important knowledge and skills as they become digital citizens. This is but one example of readily- accessible material, which has been used nationally to do what we need to do locally.

For teachers:

Teachers must place themselves at the heart of innovation in education. They must take risks to learn new online resources, tools and strategies for teaching with them, and advocate for access to new technologies to develop effective online learning experiences for students. Within the history of public education, the arrival of the internet has been a relatively new phenomenon in our classrooms. For this reason, teachers must learn and be willing to adapt to new methods and pedagogies to support students in the online domain, as opposed to employing an "additive" approach to digital experiences. Technology will continue to change rapidly and new tools will evolve quickly, so our digital learning -skilled teachers must troubleshoot problems, learn new skills, and most importantly, share what they learn with colleagues. Our teachers must also commit to resiliency, as they continue to hone their skills in on-demand learning settings themselves. The role of the teacher in students' online learning is essential.

To empower this significant change, teachers also need support in their work as well -- support from school leaders, from policymakers, and lawmakers. The road to a significant change is not easy -- but to ignore the significant changes in students' digital lives in our school systems risks making our schools irrelevant to our students.

For principals and school district leaders:

School leadership must invest in professional development as we face the unprecedented investment of up to \$2 billion in educational technology in New York's Smart Schools Bond Act. Leaders must take the long view to a digital transformation of their schools to use online tools more effectively. To support better systems of learning, schools must work with regional consortia of schools, such as Boards of Cooperative Educational Services (BOCES) and other similar initiatives within Big 5 School Districts to ensure teachers are trained and supported. In this way, New York's educators can provide online learning opportunities and equitable access to courses for all students in New York State.

School leaders also need to take risks -- to help develop a new vision of the quality and personalization of learning that online digital learning tools and courses can support. They need to work collaboratively -- not only internally in their systems by engaging all stakeholders including teacher associations and administrator associations, but also outside the confines of the walls of their schools to partner with other schools, BOCES, higher education partners, and private sector employers as well. Finally, school leaders need to invest confidence, support and time in teachers and faculty leaders to implement these changes within their school systems.

The Council's Recommendations

After extensive communication with key education stakeholder organizations in New York State, the Online Learning Advisory Council also proposes specific recommendations for higher education systems and their faculty, policymakers at the New York State Education Department, and the Legislature and Governor.

While we offer a vision of what students, teachers, and school leaders need to do as New York's education system embarks on a journey of digital transformation, the Council's report focuses its most specific recommendations to its audience as defined in the statute that mandated our work: the Commissioner of Education, the Senate and Assembly, and the Governor's Office. These recommendations can shape that vision into reality. For this reason, there are four significant recommendations to support the further development and expansion of online learning opportunities for students -- both in the development of online course opportunities, and in online learning experiences in our classrooms.

Recommendation #1: The Online Learning Advisory Council recommends that the Legislature and Governor allocate \$100 million to support multi-year professional development grants. These grants will support both planning and implementation to expand development of instructional skills using online tools in classrooms, and online course availability and capacity.

With this allocation of targeted grant funding, the Council intends that New York State should make a strong financial commitment to professional development for two reasons: 1) to support a transformation in pedagogy using online learning tools, and 2) to empower the development of high- quality online learning courses and scalable systems of support to provide equitable access to programs for students throughout New York State.

New York has made a significant investment in hardware and connectivity through the Smart Schools Bond Act. To make the most effective use of that equipment, our educators and administrators need well- planned, high quality, job- embedded

professional development. It is strongly advised that, prior to funding professional development for online learning through these grants, the State Education Department receive and award consortia applications to support effective planning. These consortia of school districts, BOCES, or Big 5 School applications for planning and implementation grants should require involvement of partners, including higher education, administration and teacher associations, and private sector. These targeted consortia programs will leverage an investment of professional development to develop equity of access to online learning experiences, and to transform teaching pedagogy in our school systems. They are intended to develop models to grow our virtual learning identity in New York State.

Recommendation #2: The Online Learning Advisory Council recommends that the Board of Regents, Legislature and Governor grant authority to the NYS Education Commissioner to provide certain waivers of regulations to support Innovation Networks.

Much like the Start--Up NY program created by the Governor to exempt new business from certain New York State regulations, we recommend that the Board of Regents, Legislature and Governor grant the Commissioner of Education the authority to empower “Innovation Networks” with waivers of specific NYSED and statutorily-required regulations. These waiver requests are solely intended to enhance the quality of student learning experiences, spur the development of innovative online learning programs, and foster the growth of the digital transformation of schools. Participation in a professional development consortia (see Recommendation #1) might also be considered as a requirement for the waiver request.

Like the incentives created under the Start--Up NY program, which tied participation to specific metrics for success, Innovation Networks will be accountable to demonstrate significant improvements and changes in online learning opportunities and quality of online learning experiences for students in New York State. Where necessary, such waivers could encourage innovation, experimentation, and improvement of pedagogical practices to better meet the needs of today’s students.

The Commissioner’s waivers will not include any regulation related to health and safety. Instead, these waivers should be sought only to facilitate quality student learning opportunities with online tools or programs. Waivers could extend to areas that are currently governed by law or regulation that may inhibit innovation and risk--taking in faculty and staff.

One early example that emerged in the Council’s discussion was a potential waiver for seat time required under the Carnegie Unit. In certain limited instances, a waiver of minimum seat time requirements may allow a student to learn a course curriculum more quickly. (Elsewhere, we discuss a possible need to consider seat time requirements

more broadly under the Part 100 regulations.) Quality of program should always be guiding the criteria the Commissioner uses to consider a waiver.

Another example the Council discussed was the possible waiver of statutory requirements for a faculty's Annual Professional Performance Review. To allow a teacher to adopt an innovative practice, it may be appropriate to use a student learning objective measure, rather than a state growth measure determined solely by a state assessment. This kind of flexibility might encourage the risk taking necessary to innovate.

The Online Learning Advisory Council is also mindful of individual district collective bargaining agreements. Waivers should not be construed as a means to avoid collective bargaining. In fact, labor collaboration may be required as part of an application for an Innovation Network's regulation waiver. We would emphasize the involvement of collective bargaining units in the development of waiver proposals, and we support the sign-off of the bargaining unit on proposals as an indication of such participation.

Recommendation #3: The Council recommends that the state adequately staff and support NYSED's Education Technology capacity and resources. The purpose is to bring forward innovations in online education and educational technology.

Currently, the NYSED Education Technology staff consists of a team of four (4) professionals, none of whom have an education technology background, and a coordinator. This is an insufficient allocation of staff and expertise to support innovations in educational technology in New York State. Drawing from the experience of other states that have advanced online learning opportunities, there is a need to prioritize state--level educational technology leadership within NYSED. Specifically, we recommend creating a cabinet--level position at the department, a newly--created and state--funded Chief Digital Officer. This leader should be tasked with advancing educational technology programs and initiatives in New York State. The Chief Digital Officer also should coalesce existing New York educational technology bodies toward shared purposes and objectives (e.g. New York State Association for Computers and Technologies in Education, Technology Policy and Practices Committee, Regional Informational Centers, and the Distance Learning Consortium of New York State). There is a need to bring forward innovations in online education and educational technology drawn from national and international examples, and to advise the field, the Commissioner, Board of Regents, and governing bodies of potential changes in how education is delivered effectively for today's student needs. This need requires an increase in the numbers and expertise of the NYSED Education Technology staff as their role will change significantly, in parallel with the proposed changes in this paper.

Based on the Council's findings, we believe New York as a whole is behind other states in many pedagogical innovations – particularly regarding online learning. These innovations warrant significant planning and work. The Council recommends a standing committee, under the direction of NYSED's Chief Digital Officer, be charged to review current trends and forecast the online learning needs of the students of our state, and to develop policy recommendations for the Commissioner to improve opportunities for online learning programs, as well as policy recommendations to support a digital transformation in our schools. We recommend that at least 50% of this committee be drawn from a rotating pool of PK-12 and Higher Education. Recommendations from the committee must be grounded in current research in the education field -- research that presently needs more attention from higher education.

The investigation and work of our Council has proved that there are significant resources to support online learning both inside and outside New York. The purpose of a standing body would be to bring those resources together to best inform policymakers and lawmakers of recommended directions in the area of pedagogy, teaching and learning. There were also many topics that emerged during our Council's work that could and should be addressed by this group. Examples include: needs for consistent quality standards for online learning, Competency Based Education and potential flexibility in seat time requirements in the Part 100 Regulations, development of individualized learning portfolios, and new literacy requirements in a digital age.

Recommendation #4: The Council recommends higher education systems develop teacher pre-service experiences in online and blended learning.

There is a significant need to build capacity in teacher preparation programs to better equip our emerging teachers with the online skills they will need to teach 21st century students. While many of our colleges and universities have begun including online learning as part of their offerings and even requiring experience in some cases, our newly certified teachers need to have online learning and teaching skills embedded in their post-secondary coursework to fully experience the role technology plays in providing personalized learning. The professional development effort to transform the pedagogy of current teachers will be a significant challenge for the P-12 system. Preparing pre-service teachers with skills using online tools for instructional purposes would greatly assist that transition and provide the skills necessary for teachers who are just entering the field.

The pedagogical skills necessary to effectively incorporate online and blended learning is a significant component to consider in a pre-service teacher preparation program. We recommend a collaborative process that includes institutions of higher education offering teacher preparation programs, teacher preparation program faculty, SED and other stakeholders to identify and develop the necessary program changes that would support this outcome.

The Council's recommendations are guided by information obtained through current practice, contributions from experts, and research. The full report includes additional recommendations that respond to the specific areas of focus prescribed in the statute that created the Online Learning Advisory Council.

Introduction

This report is the result of the work done by the Online Learning Advisory Council (Council) formed by the legislature as a result of Senate Bill 5509--C and convened by the New York State Education Department from June 2015 to September 2015.

This report is comprised of three sections. The first section discusses background information leading up to the establishment of a temporary Online Learning Advisory Council. The second section describes the Council including its legislative charge and the work that it undertook to make the recommendations that were requested. The third section details the recommendations according to the areas that were requested in the statute.

Background

The Legislative Commission on Rural Resources began investigating the gaps of equity regarding access for students in rural environments. In May 2013, a bill was introduced and eventually passed the Senate to form a committee to investigate the potential lack of access and technology in New York State. This bill was sponsored by Senator Catharine Young, (R,I,C--Olean), Chair of the Legislative Commission on Rural Resources, and co--sponsored by Assemblywoman Catherine Nolan, (D--Queens County, NY), Chair of the Assembly's Education Committee.

"The legislation directs the Commissioner of Education to establish an Online Learning Advisory Council and to make recommendations regarding the development and delivery of such services. The Council would be tasked with sharing their findings and recommendations with the Legislature and the Governor to be considered for inclusion in the 2015-2016 budget" (Young, 2014 p. 1).

The Advisory Council ultimately was made up of 11 members; two members appointed based upon the recommendation of the Governor, two members appointed based upon the recommendation of the temporary President of the Senate, two members appointed based upon the recommendation of the speaker of the Assembly. The remaining members are teachers, principals and superintendents from rural, urban and suburban schools that were selected by the Commissioner of Education. The commissioner

appointed the co--chairs of the Online Learning Advisory Council.

The recommendations of the Online Learning Advisory Council address the following areas:

- a) Guidance for use of a statewide online and blended learning network;
- b) Best practices and model school district policies to inform implementation of an online and blended learning program, including broadband access;
- c) Academic programming suited for online and blended learning;
- d) Partnerships with institutions of higher education and other relevant stakeholders for workforce opportunities using online and blended learning; and
- e) A review of teaching and professional development policies and practices.

The Online Learning Advisory Council was constituted in July of 2015. The Council members divided into three subcommittees: Professional Development, Guidance and Policy, and Virtual Learning.

Online Learning Advisory Council Members

Co--Chair: Mr. Scott Bischooping, District Superintendent, Wayne--Finger Lakes BOCES

Co--Chair: Dr. David O'Rourke, District Superintendent, Erie 2- Chautauqua-Cattaraugus BOCES

Council Members:

Paul Gasparini, High School Principal, Jamesville--Dewitt School District

Elizabeth Hardy, Staff Specialist for Distance Learning, Cattaraugus--Allegany BOCES

Benjamin Higgins, District Technology Integration Specialist, Springville Central School District

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Thomas Via, Special Education Teacher, Plattsburgh City School District

Acknowledgements

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Stakeholder Agencies

- Conference of Big 5 School Districts (including New York, Syracuse, Buffalo, Rochester and Yonkers)
- New York State United Teachers (NYSUT)
- New York State School Boards Association (NYSSBA)
- New York State Council of School Superintendents (NYSCOSS)
- School Administrators Association of New York State (SAANYS)

NYSED Liaison for the Council

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The Council's Research, Examples, and Methodologies

Technology increasingly has a significant impact in PK-12 education (Archambault & Crippen, 2009). New York State is no exception and the use of technology is transforming how students learn in the classroom. Online learning should be embraced for its potential to improve educational equality. Online learning can break down geographical, financial, and social-cultural barriers in alignment with the philosophy of democratic, readily accessible education for all citizens; its benefits for facilitating improved access and equity are relevant (NYSUT,n.d). When used strategically, technology can help schools with limited funding to equal the playing field, provide access to academic or interest--based programming, and support course remediation. While many schools across New York State are exploring virtual learning initiatives, much needs to be studied to share statewide.

We are moving away from “transmission” modes of teaching, with the same information going to all students, toward the creation of more personalized learning environments. Online instruction represents significant change from face--to--face teaching. It should not be a matter of simply taking lectures and textbook information and dividing the information into sessions; time, learning activity, and both student and teacher work must be carefully designed. Research--based online teaching practices and online instructional design are necessary to understand how to present content in an engaging manner, how to facilitate online activities, interactions and collaborations, and how to design effective, efficient, and authentic online feedback, assessments, and evaluations.

The goal is to transform teaching and learning. Local requirements for online learning experiences should not be seen as a substitute for this transformation. Lines of communication and collaboration of staff and between schools, BOCES, and higher education are critical to ensure student success in these programs. Districts are encouraged to explore online learning experiences available to students, and to work to support these learning experiences where needs exist. Online learning can allow educators to reach students across the spectrum of academic abilities. For instance, online learning can be used with students in advanced placement or college--prep classes, at--risk students who need extra assistance or credit--recovery classes (due to illness), and adult students in need of GED or workforce training.

The Online Learning Advisory Council felt the following needs were clear:

1. **Improving equity and access to virtual learning classes or experiences, and ensuring the success of students in these programs, to support the long-term success of students in college and careers.**
2. **Deepening the learning experiences of all children with greater opportunities for personalization of learning and pursuit of student interests. In this area, online learning tools can be catalysts for transformations in teaching and learning.**

Working Definitions of Online and Blended Learning

Definitions of “online learning” are many and various. One organization’s working definition of online learning is “any course or program conducted outside of the physical classroom using Internet Based technology for instruction.” A further distinction is then made between instruction that is “fully online,” meaning that at least 80 percent of learning is conducted online at a distance with little or no face to face component, and “hybrid” or “blended” learning, which combines online learning with face to face instruction (National Association of Independent Schools).

We felt the following researchers’ definitions were helpful. “**Online Learning** is teacher led education that utilizes technology with Intranet/Internet based tools and resources as a delivery method for instruction, research, assessment, and communication. It may be synchronous (in real time) or asynchronous (separated by time) and accessed from multiple settings (in school and/or out of school buildings). Online learning can be fully online, with all instructions taking place through Internet, or online elements can be combined with face--to--face interactions in what is known as blended learning.

Blended Learning is a formal education program, in which a student learns at least in part through online delivery of the content and instruction (with some elements of control over time, place, path, and/or pace) and at least in part at a supervised traditional school away from home” (Dichev, 2013, p. 93).

Finally, the types of technology tools that students use to access online learning experiences are diverse. There is an assumption in the field that online learning only means students and a computer, but we see districts using technology in many ways such as through the use of smart boards, tablets, smartphone applications, and other tools as well.

Online Learning Outside of New York State

Student Opportunities

Comprehensive research and data about existing state and local PK-12 policies is difficult to capture because of the fast--moving pace of the digital learning landscape,

and its relative newness in impacting classrooms. The data reflected in this section was current as of 2013-2014, unless noted otherwise. Statistics on blended learning are particularly difficult to compile since individual teachers can generate their own blended content without documentation.

Thirty states have fully online schools with 315,000 students in attendance (Watson, Pape, Murin, & Vashaw, 2014). In very approximate terms, 65% are charter schools and 35% are operated by local districts and in a few cases by state agencies. Although only 44% of the full-time virtual schools are operated by private education management organizations (EMOs), they account for 80% of all enrollments. School districts are increasingly creating their own virtual schools but these tend to have far fewer students enrolled. Florida Virtual School (FLVS) is by far the biggest state virtual school and accounts for 50% of all course enrollments in state virtual schools nationally (Molnar 2013, 2014).

State sponsored virtual schools exist in twenty six states that provide supplemental online courses (online work in addition to face--to--face). Eleven states have course choice policies or programs that allow students to choose online courses from one or more providers (Watson, 2014).

Five states mandate at least one online course for high school graduation (Alabama, Arizona, Florida, Michigan, and Virginia) with North Carolina possibly enacting a similar requirement. Some states have legislation meant to promote taking online or blended courses to graduate. Examples include Georgia, West Virginia, New Mexico, and Massachusetts. The Massachusetts High School Program of Studies specifically mentions taking online coursework as part of college preparation. Many individual districts or schools have also included online learning as part of their graduation requirements (Watson, 2014).

Teacher Preparation

In the area of professional development, several states have specifically mandated training for in-service teachers who are teaching online and/or blended learning:

- Pennsylvania requires professional development for teaching online credit recovery
- Washington, DC requires six hours for all blended/online course teachers
- North Carolina license renewal requires professional development in integrating digital skills (Watson, 2014)

Several states allow in-service teachers to supplement their credentials with various forms of endorsements:

- Vermont has an Online Teacher Specialist endorsement (Vermont Standards Board for Professional Educators, 2013, Vermont Standards Board for Professional Educators to Superintendents, August 21, 2013)
- Georgia has an online teaching endorsement program, (Georgia Professional Standards Commission, 2014)
- Idaho offers an endorsement to certified teachers who take coursework in online teaching in addition to completing an eight--week field experience in online teaching or who have one year of experience delivering PK-12 curriculum in an online environment (Arachambault, L., Debruler, K., & Freidhoff, J., 2014)

There are few large scale models in terms of pre-service teacher preparation legislation. Minnesota, for example, requires all college and university programs related to teaching certifications to include coursework in the areas of online and blended learning. More typically, there are individual state and private institutions of higher learning that have a variety of program requirements or recommendations. Several innovative programs are profiled in iNACOL's *Partnering for Success: A 21st Century Model for Teacher Preparation* (Kennedy, K. & Arachambault, L., 2013).

The report *Keeping Pace with K-12 Online & Blended Learning: an Annual Policy Review* provides information about online learning policy from all 50 states and from many individual districts. It also highlights innovative school districts such as Washington, DC, which utilizes Technology Instructional Coaches to deliver professional development that focuses on helping teachers analyze and use the data being produced by the digital content (Watson, 2014).

PK-12 Research Findings

To date most online learning research has focused on the post-secondary level. Researchers warn about generalizing findings on to the PK-12 population due to diverse needs and the varying technology. Additional research is necessary to continue to explore online learning. However, there is evidence to suggest that online learning can be implemented in many different ways. Teachers could enhance their instruction with online content, opportunities for online activities, interaction, or discussion, with online feedback or assessments occasionally throughout the school year or every day. A student can take one or more online classes as enrichment, or as an elective, or the student could be enrolled in a full--time virtual school. The motivation to take the course could be advanced placement or credit recovery, access to unavailable courses, remediation, or dual credit (Dichev, C., Dicheva, D., Agre, G., & Angelova, G., 2013).

Each of these options mentioned above involves many variables. As displayed in

Figure 1 (Dichev, C., Dicheva, D., Agre, G., & Angelova, G., 2013) the number of permutations becomes staggering.

Figure 1: Defining Dimensions of Online Programs

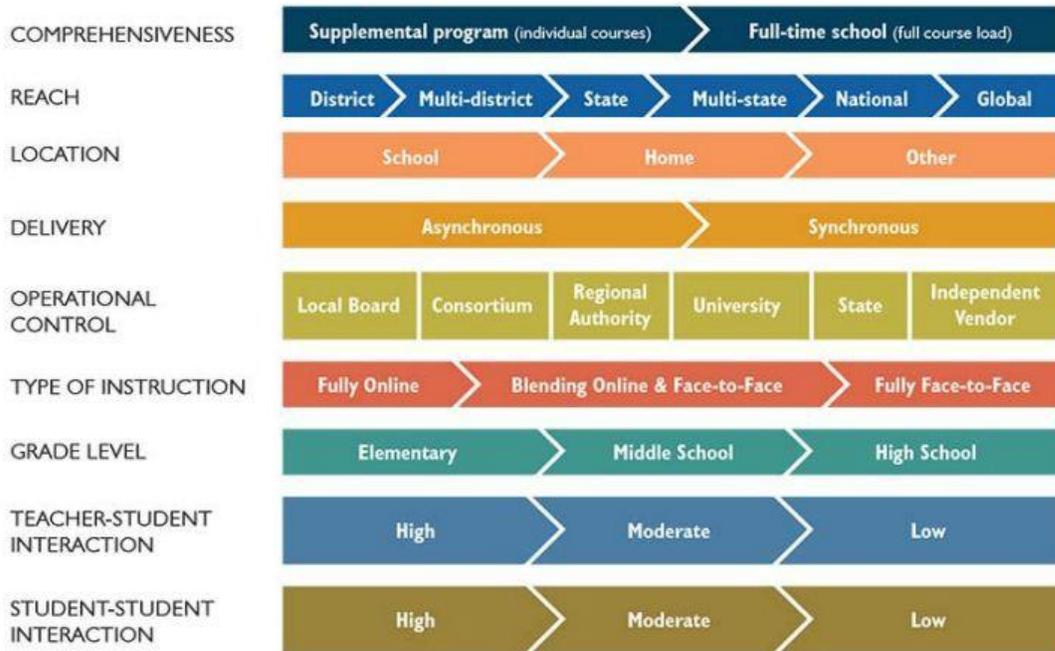


Figure adapted from Gregg Vanourek, A Primer on Virtual Charter Schools: Mapping the Electronic Frontier, Issue Brief for National Association of Charter School Authorizers, August 2006.

© Keeping Pace with K-12 Online and Blended Learning, 2012, kpk12.com

New York State Snapshot

School District Level Models

School districts across New York State have the opportunity to participate in a variety of long-standing online and blended learning programs. The continued development of these new technologies provides additional avenues for enhancing the education of all students, preparing them for future success regardless of geographic location, grade or subject area, or academic need. Whether the delivery has been designed locally or in partnership with colleges, regional BOCES, the New York State Distance Learning Consortium (NYSDLC) or others, the ability to strengthen academia through digital tools has and will continue to benefit future generations of teachers and learners. While all districts have access to the programs listed below, there is a cost to the district, typically per student in a tuition format. There is also a cost in ensuring students have proper access to the appropriate technology and support to be successful in the program. Examples include:

Video Conference Courses (synchronous courses):

Provided as a BOCES service and offered since the early 1990s, video conference equipment is used in real time to share approximately 456 courses within NYS daily. Traditionally, a host teacher in one district connects with students in up to three other classrooms from districts throughout the state. These video conference courses are provided through High Definition (HD) technology, reach over 5,000 students and offer program opportunities that range from traditional high school courses to Mandarin Chinese, College Biology and International Business. The New York State Distance Learning Consortium (NYSDLC) provides a course database which is made available to guidance counselors and school administrators to select courses meeting the needs and interests of their student population and district.

Video Conference Collaborations:

Schools throughout New York State have the opportunity in partnership with regional BOCES or on their own to participate in over 1800 virtual experiences for grades PK-12. Through live two-way interactive video services, more than 30,000 students have been able to learn from experts across the globe. These virtual experiences range from the Manhattan School of Music, to the Ellis Island National Monument, the Buffalo Zoo, the Smithsonian, and NASA. Students can have personalized interactions on a vast number of topics. Classroom collaborations are also happening globally, allowing connections to be developed with teachers and students from every continent providing greater access to specified content and building a greater awareness of other perspectives and cultures of the world.

Blended Learning / Flipped Classroom:

The Blended Learning / Flipped Classroom approach combines the benefits and value of in--person classroom learning, with the convenience and flexibility that e-learning offers. With online content, students can study and learn at their own pace, in an environment that suits them. In-person instruction gives learners the chance to ask teachers questions, and receive feedback in real time. Online learning and in--person teaching both have advantages, but blended learning allows students and instructors to reap the benefits of both.

Asynchronous Online Learning:

In this model, learners learn at their own pace and courses are supported locally or through subscribed services of BOCES to provide academic opportunities and support to students throughout the state.

- **Online Elective, Independent, and Enrichment Courses** - Students are able to choose from a variety of courses, including those of special interest for college/career paths, that otherwise would be unavailable to them due to the lack of funding and/or local teaching expertise. Such courses include: Marine Biology from Florida Virtual School, Game Design from Edgenuity, or open courses from colleges like MIT and Columbia University. BOCES and the NYSDLC members can also provide students with mentors and a Teacher of Record for school districts to work closely with online students.
- **VAP Courses** - Through the recent Virtual Advanced Placement (VAP) Grant, many BOCES were able to build a network of NYS developed AP courses that are also shared on the NYSDLC course database. Students can participate in these courses online, anytime, anywhere, or receive the course in a blended fashion through video conference and an online Learning Management System (LMS) platform.
- **Online Summer School** - Online Summer School through a BOCES Summer School Coser provides many students access to online content and the ability to proceed through a course at their own pace. Certified teachers are available to coach students toward success.
- **Credit and Unit Recovery** - Recently a variety of online services have been made available to assist students with credit and unit recovery. Using a computer lab, library, or specially designated space, students are assigned to work online toward credit recovery. Teacher mentors are available to assist students and rely on the support of subject--certified teachers when subject matter expertise is needed. When a student begins to fall behind during a unit, supplemental online instruction provides him/her the opportunity to catch up before conceptual understanding is lost or the student falls further behind.

Just as in face--to--face classrooms, while there are many high quality examples for each of these models, there was an evident need for more universally understood standards of quality programs. We address this need in recommendations elsewhere in our report. It is also important to recognize areas of regulation that currently are working to encourage online learning innovations. The Part 100.5(d) Regulation's credit for independent study is particularly important to maintain in New York State. In fact, many online learning opportunities for students are presently offered under this area of the regulation. We recommend that this flexibility be maintained to support mastery of commencement--level learning outcomes attained through both face--to--face and online learning delivery.

New York's Teacher Preparation

Except for minimal recognition that New York's teachers teaching online need preparation that may differ from traditional programs, analysis provided little evidence of progress toward requirements for the preparation, certification, and licensure of online teachers; and, although there has been some attention to the need for ongoing professional development of teachers in virtual environments, there has been very little specific state legislative movement made in this area either (Molnar 2015). The study of requirements may be an appropriate area for NYSED to explore in the future. The Council strongly encourages that policymakers should take care to avoid disrupting successful practices where they have emerged.

New York State is unique in that NYSED has a defined certification designation of "Technology Specialist." The content core of a registered Education Technology Specialist program "prepares candidates with the knowledge, understanding, and skills for using various types of technology for teaching to the State learning standards for students ... and for instructing other school staff and students in using technology for teaching and learning." (Section 52.21(b)(3)(xv)(a) of the Commissioner's Regulations) This certification holds potential for helping teachers learn how to use online learning opportunities appropriately, but currently is not a hiring category in all districts in New York State.

The Council's Recommendations

Using the above statements as the lens for its work, the Council arrived at four prioritized recommendations:

Recommendation #1: The Online Learning Advisory Council recommends that the Legislature and Governor allocate \$100 million to support multi-year professional development grants. These grants will support both planning and implementation to expand development of instructional skills using online tools in classrooms, and online course availability and capacity.

With this allocation of targeted grant funding, the Council intends that New York State should make a strong financial commitment to professional development for two reasons: 1) to support a transformation in pedagogy using online learning tools, and 2) to empower the development of high-quality online learning courses and scalable systems of support to provide equitable access to program for students throughout New York State.

New York has made a significant investment in hardware and connectivity through the Smart Schools Bond Act. To make the most effective use of that equipment, our educators and administrators need well-planned, high quality, job-embedded professional development. It is strongly advised that, prior to funding professional development for online learning through these grants, the State Education Department receive and award consortia applications to support effective planning. These consortia of school districts, BOCES, or Big 5 School applications should require significant involvement of partners, including higher education, administration and teacher associations, and private sector.

Support for these targeted professional development consortia applications will leverage an investment of professional development to develop equity of access to online learning experiences, and to transform teaching pedagogy in our school systems. They are intended to develop online learning models to grow in New York State. High quality professional development is often led by outstanding faculty innovators. To support transformations of teaching with technology, professional development is often job-embedded. Many districts utilize Teachers On Special Assignment, Technology Specialists, or BOCES Cooperative Service Agreement staff who can sustain long term relationships with a school's faculty over a period of years.

Further, professional development consortia need to be organized into communities of practice to ensure that the professionals and leaders engaged in these efforts are learning from one another. To maximize the potential of digital learning throughout the state, conversations of best practice and future academic delivery/design must be made available in an ongoing attempt to provide all teachers/learners with strategies for success. Because technology provides a constantly changing system of tools and strategies in education, a statewide communication system must be developed to stay current with online learning opportunities and strategies for student engagement. BOCES plays a critical role for component NYS districts in this area. To serve districts

who are ineligible for BOCES services, NYSED must facilitate communities of practice.

Separate from the provision of professional development grants to consortia, districts must also rely on their own capacity to prioritize high quality professional development to faculty and staff to support the effective use of online learning tools and strategies in our classrooms. To this end, although the Smart Schools Bond Act funds cannot be expended on professional development, the Smart Schools Bond Act offers an unprecedented opportunity to strategically target resources for professional development at a local level. An investment of \$2 billion is transformational and should not just be used to update technology. Technology budgets can be targeted to provide professional development and Smart Schools funding used for equipment.

Administrators and teachers need high quality professional development to support decision making about provision of student programs (appropriateness of environment, content, and course design, current and emerging online learning tools and resources, pedagogy, etc.). Therefore, matters of professional development funding, both short- and long-term, should be addressed to ensure that investments in technology are financially sound and sustainable. The infrastructure must fully support digital learning.

Local groups or consortia need to work in cooperation with regional teacher centers, BOCES, and local colleges to discuss the range of technological resources needed to participate successfully in online learning.

Recommendation #2: The Online Learning Advisory Council recommends that the Board of Regents, Legislature and Governor grant authority to the NYS Education Commissioner to provide certain waivers of regulations to support Innovation Networks.

Much like the Start-Up NY program created by the Governor to exempt new business from certain New York State regulations, we recommend that the Board of Regents, Legislature and Governor grant the Commissioner of Education the authority to empower “Innovation Networks” with waivers of specific NYSED and statutorily-required regulations. Innovation Network waiver requests are solely intended to enhance quality of student learning experiences, spur the development of innovative online learning programs, and foster the growth of the digital transformation of schools.

Although the Commissioner presently possesses waiver authority in certain areas unrelated to online learning, Innovation Network waivers are specifically intended to promote quality online learning program development. For this reason, participation in a professional development consortia (see Recommendation #1) may be considered as a prerequisite to Innovation Network waiver requests.

Like the incentives created under the Start-Up NY program, which tied participation to specific metrics for success, Innovation Networks will be accountable to demonstrate significant improvements and changes in online learning opportunities and quality of online learning experiences for students in New York State. Where necessary, such waivers could encourage innovation, experimentation, and improvement of pedagogical practices to better meet the needs of today's students.

It is essential that Innovation Networks learn from each other, and there are support structures to convene and sustain these initiatives. The Department of Education would provide oversight of the administration and evaluation of waivers provided to innovation networks, and support innovation networks in learning from each other.

The Commissioner's waivers will not include any regulation related to health and safety. Instead, these waivers should only be sought to facilitate quality student learning opportunities with online tools or programs. Waivers could extend to areas that are currently governed by law or regulation that may inhibit innovation and risk-taking in faculty and staff.

The Online Learning Advisory Council is also mindful of individual district collective bargaining agreements. Waivers should not be construed as a means to avoid collective bargaining. In fact, labor collaboration should be encouraged as a significant step in planning proposals for Innovation Networks, and may be required as part of an application for an Innovation Network's regulation waiver. We would emphasize the involvement of collective bargaining units in the development of waiver proposals, and we support the sign-off of the bargaining unit on proposals as an indication of such participation.

Recommendation #3: The Council recommends that the state adequately staff and support NYSED's Education Technology capacity and resources. The purpose is to bring forward innovations in online education and educational technology.

Based on the Council's findings, we believe New York as a whole is behind other states in many pedagogical innovations – particularly in the area of full-scale implementation of online learning. However, these innovations warrant significant planning and support at the state level. Currently, the NYSED Education Technology staff consists of a team of four (4) professionals, none of whom have an education technology background, and a coordinator. There is no cabinet-level educational technology role at the NYSED, and the structure of SED needs to adapt to needs from the field in technology in education. Other states (e.g. Kentucky) have invested in their state education departments to ensure capacity to lead and promote the use of virtual learning tools with students. We recommend that New York should do the same, and the legislature, division of budget, and Governor's office need to provide pressure and resources to the NYSED to make

this happen. Appendix A provides a suggested structure and budget figure needed to support this structure (\$700,000 per year).

This is an insufficient allocation of staff and expertise to support innovations in educational technology in New York State. Drawing from the experience of other states who have advanced online learning opportunities, there is a need to prioritize state-level educational technology leadership within NYSED. Specifically, we recommend creating a cabinet-level position at the department, a newly-created and state-funded Chief Digital Officer, tasked with advancing educational technology programs and initiatives in New York State, and tasked with coalescing existing educational technology bodies toward shared purposes and objectives (e.g. New York State Association for Computers and Technologies in Education, Technology Policy and Practices Committee, Regional Informational Centers, and the Distance Learning Consortium of New York State).

There is a need to bring forward innovations in online education and educational technology drawn from national and international examples, and to advise the field, the Commissioner, Board of Regents, and governing bodies of potential changes in how education is delivered effectively for today's student needs. This need requires an increase in the numbers and expertise of the NYSED Education Technology staff as their role will change significantly.

Further, partnerships with New York's universities (and specifically their Departments of Education) ought to be established and facilitated by NYSED's Educational Technology staff to conduct research at the PK-12 level to investigate and evaluate existing practices, and to improve understanding of effective and engaging online teaching and learning. This evaluation can be required, for example, as a component of professional development planning and implementation grants or Innovation Network waivers. A commitment to ongoing research and data collection and analysis is essential to inform decisions, policy, curriculum development, professional development, and course design approaches, and to continue to learn from the online teaching and learning that is being implemented in schools and homes throughout the state.

In addition, the Council recommends a standing committee, under the direction of NYSED's Chief Digital Officer, be charged to review current trends and forecast the online learning needs of the students of our state, and to develop policy recommendations for the Commissioner to improve opportunities for online learning programs, as well as policy recommendations to support a digital transformation in our schools. We recommend that at least 50% of this committee be drawn from a rotating pool of PK-12 and Higher Education. In addition, NYSED, NYSUT, and NYSCOSS, The Conference of Big 5 School Districts, and SAANYS should provide guidance and expertise to this committee. In addition, this committee should also have representation

from specific experts in the field, from RICs, BOCES, NYSDLC, and school districts. The council members should also represent the rural, urban and suburban areas of New York State.

Recommendations from the committee must be grounded in current research in the education field. Given the limited availability of research and evaluation of current online programming in PK-12 education, this needs far more attention from higher education's experts and researchers.

The investigation and work of our Council has proved that there are significant resources to support online learning both inside and outside New York. The purpose of a standing body would be to bring those resources together to best inform policymakers and lawmakers of recommended directions in the area of pedagogy, teaching and learning.

There were also many issues that emerged during our Council's work that could and should be addressed by this group. Examples include: standards for high quality online learning experiences and resources, Competency Based Education, flexibility in seat time requirements in the Part 100 Regulations, development of individualized learning portfolios, and new literacy requirements in a digital age.

Recommendation #4: The Council recommends higher education systems develop teacher pre-service experiences in online and blended learning.

There is a significant need to build capacity in teacher preparation programs to better equip our emerging teachers with the online skills they need to teach 21st century students. While many of our colleges and universities have begun including online learning as part of their offerings, and even requiring experience in some cases, our newly certified teachers need to have online learning and teaching skills embedded in their post-secondary coursework to fully experience the role technology plays in providing personalized learning. The professional development effort to transform the pedagogy of current teachers will be a challenge for the P-12 system. Preparing pre-service teachers with skills using online tools for instructional purposes would greatly assist that transition and provide the skills necessary for teachers who are just entering the field.

Except for the recognition that online teachers need preparation that may differ from traditional preparation, overall our legislative analysis provided little evidence of growth in policy or statute in the U.S. that would require significant differences in the preparation of teachers who teach online. There is a need for significant progress toward requirements for the preparation, certification, and licensure of online teachers; and, although there has been some attention to the need for ongoing professional

development of teachers in virtual environments, there has been no specific state legislative requirement made in this area either (Molnar, 2015). The pedagogical skills necessary to effectively incorporate online and blended learning is a significant component to consider in a pre-service teacher preparation program. We recommend a policy in this area, but without a strong research base behind such a recommendation, it would be wise to allow higher education faculty to define any requirements in multiple contexts and settings rather than a single requirement for online teaching preparation. We recommend a collaborative process that includes institutions of higher education offering teacher preparation programs, teacher preparation program faculty, SED and other stakeholders to identify and develop the necessary program changes that would support this outcome.

There are no widespread models of state pre-service teacher preparation policy or legislation requirements in the United States. Minnesota, however, requires all college and university programs related to teaching certifications to include coursework in the areas of online and blended learning. Of course, there are individual state and private institutions of higher learning that have a variety of program requirements or recommendations. Several innovative programs are profiled in the International Association for PK-12 Online Learning's (iNACOL) Partnering for Success: A 21st Century Model for Teacher Preparation (Kennedy, K. & Arachambault, L., 2013). It is also worth noting that we could find little research about the effectiveness of such requirements, so to the extent that NYS institutes requirements, the effectiveness of these programs also need study.

Finally, in our research we could find only a few state certifications or endorsements for teaching online courses in the United States. If New York were to create an endorsement for online teaching, it would be important for NYSED to ensure that presently certified NYS teachers who teach online are not unintentionally excluded from their current online teaching as a result of a sudden implementation of a new requirement.

What Is Needed to Support the Recommendations?

The Online Learning Advisory Council has noted seven areas needed for effective online and blended learning program development:

- 1. Institutional Vision and Support for Standards for Online Learning**
- 2. Professional Development for Teachers and School Leaders**
- 3. Content and Curriculum**
- 4. Equipment**
- 5. Internet Connectivity**
- 6. Models of Quality Programs and Practices**
- 7. Research, Evaluation, Program Assessment and Systemic Learning**

Institutional Vision and Support for Standards for Online Learning

To implement a change in pedagogical practice of this magnitude there needs to be significant guidance, encouragement, and resources. (OLC Quality Scorecard [Online Learning Consortium, n.d], Standards for Online Learning by Nassau BOCES, NYS Teacher Centers and NYIT [NYSUT, n.d.]) At the state level, this would mean the creation and funding of an online learning committee or task force to further the development of virtual programs and practices.

While many states have set up task forces to meet similar goals as New York has done in establishing the Online Learning Advisory Council, the Council recommends a standing online learning committee due to the significance of the implementation of online and blended learning, along with the changing landscape for teaching and learning in this area. The committee should be comprised of teachers, administrators, and members of higher education representing rural, urban, and suburban areas, and should report to the New York State Commissioner of Education. We also noted that, due to the relative newness in the use of online learning tools, there is a lack of current research to guide their uses. A standing, state level online learning committee would be able to respond to and request research information to inform the field on a regular basis. Regional Education Laboratories (RELs) can serve as educational research clearinghouses for this committee, as well as the field, as our education system ensures that practices and models are developed from a strong research foundation.

Presently, there are four key statewide bodies affecting the promotion of and dissemination of uses of technology in education in New York State: TPPC, Regional Information Centers (RIC), the Distance Learning Consortia (NYSDL), and the New York State Association for Computers and Technologies in Education (NYSCATE). These bodies need to be empowered and strengthened in their capacity and influence in order to provide coordinated sources of recommendations for policymakers and NYSED.

Since there is a lack of conclusive research concerning PK-12 online and blended models – especially in statewide implementation of large--scale systems (e.g. Florida and North Carolina), the Council has chosen not to recommend a state-wide requirement for a high school credit in online instruction. There was also concern on the part of the Council that mere compliance with this requirement might be perceived by the education community as meeting the technology learning needs of students, thus avoiding the greater need to transform pedagogical practice for all teachers. The Council would support a future online learning committee's continued review of research and practice to see if a required credit in online learning would have the impact desired in the future for New York State students.

Professional Development

Professional Development is the key to unlock the potential that resides in the Smart Schools Fund Act. (OLC Quality Scorecard [Online Learning Consortium, n.d.]), Standards for Online Learning by Nassau BOCES, NYS Teacher Centers and NYIT [NYSUT, n.d.]) New York State has provided significant resources to purchase hardware and connectivity solutions. However, these purchases will only be as productive as the professional development that is made available to the educators that will use them.

Specific communication skills, such as how to create meaningful dialogue between class members or groups of class members are important for new and existing teachers to learn. These skills are closely related to emerging course designs which emphasize interaction and collaboration. Communicating online creates new affordances and new challenges for teachers. To communicate effectively, professional development should provide teachers with the skills to use digital communication tools sensitively, effectively, and collateral to evidence--based instructional practices. High quality professional learning takes time, and requires an investment of resources. In addition, we must recognize that teachers also come to this learning with varying backgrounds and experiences and needs, so teacher professional learning also must be personalized to these needs.

Building on emerging theories related to inquiry--based learning and using the affordances of digital learning (such as what we are learning about constructivist learning), teachers need to learn a new set of design processes to *engage* students in active learning -- problem solving activities, project--based activities -- in ways that address the learning standards (Meier, 2015).

As students and educators begin to employ technology to enhance instruction, they are able to integrate what they learn using technology with what they learn offline providing many avenues for learning and success. By becoming familiar with the strengths and limitations of various tools and media, they can select and use technologies best suited to their goals. Design concepts for online classes should reflect what we are learning about learning: students need engaging opportunities to build their knowledge in ways that reflect sensitivity to differences in their learning approaches, modalities, backgrounds and readiness to learn online. In online learning environments, there is also a need to integrate or “chunk” content into design, guaranteeing student active response frequently and with varied outcome expectations.

The continued development and access of new technologies requires advanced instructional technology support by experts in the field. Therefore, collaboration with colleges and universities is required to incorporate blended learning in pre-service classes. New York State teachers currently in the field should have access to high

quality instructional technology professional development opportunities. Additional funding for professional development on instructional technology and design is necessary.

Consideration needs to be given for online teachers in completing the requirements of the Annual Professional Performance Review (APPR). Further, administrators need to receive professional development to support ongoing teacher improvement and how they can also stay up-to-date with emerging tools and practices. They are not able to “observe” instruction in the same manner as the face-to-face classroom and yet, the observation process is critical.

There is a significant need to build the capacity within higher education teacher preparation programs to provide both pre-service and in-service teachers the opportunities for online teaching preparation and ongoing professional development. Partnerships with higher education pre-service and in-service teacher education programs for certification or specialization in online teaching, emerging technologies, or blended instruction would enhance teacher education programs. Technology Specialist certification could be one example of a certification that could be shaped in this manner.

Opportunities for pre-service education students to have virtual internships in PK-12 schools offer necessary instructional experience to those interested in teaching online, perhaps as a requirement for online teaching certification. It is important that higher education not only models effective technology integration, but explicitly designs learning that ensures graduates are competent in facilitating online and blended instruction in PK-12 settings.

Content and Curriculum

It should be noted that currently there are many opportunities for school districts to access online coursework, instructional tools, and learning management systems, which support, deliver and manage student learning in New York State. The uses and access to those opportunities vary greatly by region, however. As mentioned earlier in the report, BOCES and the Distance Learning Consortium have had programs available for over 10 years. As more courses, including Advanced Placement, credit recovery, dual enrollment college credit, and other electives grow in numbers, there will be a need for NYSED to have capacity to approve the content and providers according to NYS statute and regulations.

Our school leaders have the training and experience to identify quality in face-to-face learning environments, but are not equally experienced in online learning. They need to have confidence that the online learning content their students will use is at the appropriate level of challenge and rigor.

It is also essential to look at standards of quality programs. New York needs the personnel capacity at NYSED to review and approve online programs to support greater access for students and avoid issues with deficient curriculum or content. This work is best vetted and disseminated through a NYSED facilitated standing group or committee. This would most likely be an arm of NYSED, using BOCES, RICs, or other regional bodies to certify standards of practice in online programs.

“The evaluation and selection of high quality digital curricula to support students can be the answer to many challenges: meeting new standards, supporting diverse student populations, helping underperforming learners, challenging students working above grade level, and enabling teachers to ‘do more with less’ in their classrooms. Whether a school is building a blended learning program or simply wants to enhance learning with technology, it is critical to evaluate the quality of digital learning programs in order to select technologies that will have a positive impact on student performance. The goal is to have students at every learning level empowered as learners and thinkers so they can become proficient, reach higher levels of achievement, and enjoy success in school and in life” (Hudson, 2014, p. 15).

We envision the use of these tools to engage students with high quality digital resources and content. NYSED could provide a critical role to ensure equity and quality by acting to acquire and make high quality digital content resources available statewide. We also encourage the use of a sharable environment, such as a learning management system, so that students have easy and consistent access to course materials as well as a common communication platform.

Consensus regarding emerging standards for online learning in a PK-12 setting is necessary to address course quality, teacher evaluation, supervision, scalability, course review, revision and continuous improvements. It appears that there is a broad range of misconceptions and questions; therefore online learning content should be developed and taught by NYS certified teachers in the discipline area when possible, and teachers of record who supervise and support students in online coursework should be NYS certified teachers. As schools work toward transforming education in ways that meet today’s learners, schools should hold both online and offline courses to the same rigorous standards. They should avoid digital designs that simply substitute electronic resources for printed resources and provide ample opportunities for educators to participate in instructional technology professional development programs and support.

The Council also recommends that funding be made available so that any current students in New York State can access the online coursework available through the BOCES and NYSDL networks or other approved sources without negatively impacting school district budgets. Until online and blended learning becomes a more integrated part of all student learning, it will be considered an “add on” in many districts so that an investment in student online learning could adversely affect current programming. Funding needs to be available to bridge the implementation process.

Equipment and Connectivity

The Smart Schools Bond Act can provide a significant advantage of resources to support online learning programs and tools for New York's classrooms. While both connectivity and equipment are critical for all schools in their operations, the importance of a robust technology infrastructure is critical to support an online learning environment. This goes beyond the need for broadband access in classrooms. To support students' online learning, it is also important for students to have access to high-speed internet at home.

In fact, many of the regions of New York State that have internet access issues are also regions of the state in which online courses could assist with equity of access due to school population size. To truly personalize learning through technology requires both teacher and student access to district and internet based tools. While broadband access has increased in New York State, it is still not available to students and staff in many regions. Universal broadband access will need to be a priority with the funding available to make it possible for our teachers to transform their pedagogy and students to make use of available online learning tools. There are multiple funding sources and programs to increase broadband availability for schools and students' homes. These resources need effective coordination to ensure all students are provided with the broadband access necessary to take advantage of online programming.

Models of Programs and Practice

Partnerships are essential to bring the best thinking of educators to bear on the emerging issues surrounding online learning, e.g., design issues, policy, procedures, support, personalization, supervision, communication, engagement, interaction, collaboration, feedback, evaluation and assessment. Virtual communities for online practitioners to network provide a forum for both PK-12 and higher education environments to share interests/online specialties, lessons learned, approaches, to provide a venue for discourse and exchange, reporting and reflection, informal support, mentoring and collaborations.

Some institutions are in a strong position to support the emergence of PK-12 online instruction, notably institutes of higher education (IHEs) because of their role in providing teacher certification, licenses, as well as with their extensive research and experience in all facets of online teaching and learning - from online professional development to student support. Partnerships and collaborations with existing well-regarded higher education online professional development entities are an opportunity to provide and partner on the delivery of high quality professional development for new online teachers, existing in-service teachers, online instructional designers, administrators and policymakers. Intermediate service units (ISUs) such as BOCES also have a long history of providing professional development support.

The roles of the online instructional designer, online technologist, and digital age librarian, have emerged as critical to the support of online instructors and the support of online students. Also as learning is personalized, real world contexts will need to be mediated by teachers with students, including workforce partnerships or virtual mentorships.

Research, Evaluation, Program Assessment and Systemic Learning

As with any change in instructional practice, the impact should be evaluated to direct improvements. This research and evaluation should be continuous since the technology tools we use are ever changing supporting new avenues for learning.

The Carnegie Unit of instruction (credit granting system for NYS public schools) itself warrants re-evaluation as a measure of educational attainment or “output,” particularly as New York promotes the use of asynchronous systems of online learning. Some students need less time to learn, some need more. Both learning paces can be accommodated with new online learning tools. The competing concern, however, is that time requirements also are a (limited) foundation of depth of program.

Online learning recognizes that learning can be less effectively measured by “seat time” than by successful development of skills and comprehension of subject content, also known as competency--based learning.

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Appendix A - NYSED Staffing Recommendation Budget

To successfully support, manage, and sustain the implementation of the recommendations of the Online Learning Advisory Council, the NYSED will need increased staffing resources with diverse experiences and innovative skill sets. The positions and descriptions listed below are estimated to require an estimated \$700,000/year to support the work moving forward. These positions are in addition to the Cabinet-level Chief Digital Officer role.

Innovation

NEW POSITION 1: This position would be created to **manage initiatives recommended by the Online Learning Advisory Council**, including but not limited to coordination of a state-wide Online and Blended Learning Network and advising on best practices and model district policies to inform implementation of an online and blended learning program. This position would, along with Coordinator and NYSED Senior Management, work directly with the future Standing Committee as recommended by the current Council.

NEW POSITION 2: This position would be created to coordinate a state-wide **Online and Blended Learning Network** and advise on best practices and model district policies to inform implementation of an online and blended learning program. This position would report to the NEW POSITION 1.

NEW POSITION 3: This position would be responsible for assisting in efforts related to **Online Course Design and Learning Management Systems**. This position would report to the NEW POSITION 1.

NEW POSITION 4: This position would be responsible for assisting in efforts related to **innovative designs for online and blended learning**. This position would report to the NEW POSITION 1.

NEW POSITION 5: This position would be responsible for providing insight into **technical matters, including systems, devices, and infrastructure**. This position would report to the NEW POSITION 1.

Compliance / Regulation

NEW POSITION 6: This position would be created to assist with coordination/management of programs required by regulation.

Support Staff

NEW POSITION 7: A support staff person to provide administrative support to each of the three newly--formed groups. This position would aid in managing the extensive documentation and correspondence required to manage ongoing projects.

Appendix B - Council Timeline and Events

The Online Learning Advisory Council's timeline of events and meetings are listed below:

June 2015

- Council formed through assignment of SED and Senate appointees
- Co--chairs named
- Discussion with SED officials regarding the Smart Schools Bond guidelines and goals
- Co--chairs meet with Senator Young
- Initial phone conference with SED and Senate appointed members

July 2015

- Governor's appointees assigned
- Council meeting, July 28 with Ray McNulty

August 2015

- Conference call Monday, August 17 with subcommittee leaders

September 2015

- Final draft group responses submitted by September 1, 2015
- Co--Chairs meet with Governor's staff
- Council meeting September 9; finalize an outline for the report
- The document draft written between September 9 and September 22
- Council members review draft, provide suggestions

October 2015

- Submission of draft to the Senate, Assembly, Executive, and Education Commissioner by Oct 1, 2015
- Hearings of the draft report to be held on the following dates/locations:
 - New York City - October 20, 2015
 - Albany - TBD at time of draft publication
 - Springville Griffith Institute CSD - TBD at time of draft publication

November 2015

- Revisions of report provided to Council members
- Council members provide suggestions for Final Report
- Final Report to the Senate, Assembly, Executive, and Education Commissioner by no later than November 15, 2015