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|  | Digital Learning Advisory Council |
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| Annual Report September 2021 |
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| ESE logoThis document was prepared by the Massachusetts Department of Elementary and Secondary EducationJeffrey C. RileyCommissioner **Board of Elementary and Secondary Education Members**Ms. Katherine Craven, Chair, BrooklineMr. James Morton, Vice Chair, SpringfieldMr. Jasper S. Coughlin, Billerica, Student member Ms. Amanda Fernández, BelmontMr. Matthew Hills, NewtonMs. Darlene Lombos, BostonMr. Michael Moriarty, HolyokeMr. James Peyser, Secretary of Education, MiltonMr. Paymon Rouhanifard, BrooklineMs. Mary Ann Stewart, LexingtonDr. Martin West, NewtonJeffrey C. Riley, CommissionerSecretary to the BoardThe Massachusetts Department of Elementary and Secondary Education, an affirmative action employer, is committed to ensuring that all of its programs and facilities are accessible to all members of the public. We do not discriminate on the basis of age, color, disability, national origin, race, religion, sex, gender identity, or sexual orientation.  Inquiries regarding the Department’s compliance with Title IX and other civil rights laws may be directed to the Human Resources Director, 75 Pleasant St., Malden, MA 02148-4906. Phone: 781-338-6105.© 2021 Massachusetts Department of Elementary and Secondary EducationPermission is hereby granted to copy any or all parts of this document for non-commercial educational purposes. Please credit the “Massachusetts Department of Elementary and Secondary Education.”This document printed on recycled paperMassachusetts Department of Elementary and Secondary Education75 Pleasant Street, Malden, MA 02148-4906Phone 781-338-3000 TTY: N.E.T. Relay 800-439-2370www.doe.mass.eduState Seal of Massachusetts |

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# I. Introduction

The 2013 virtual schools legislation ([Chapter 379 of the Acts of 2012, An Act Establishing Commonwealth Virtual Schools](http://www.malegislature.gov/Laws/SessionLaws/Acts/2012/Chapter379)[[1]](#footnote-2)) created the Digital Learning Advisory Council (DLAC) to advise the Board of Elementary and Secondary Education (BESE) and the Commissioner of Elementary and Secondary Education (Commissioner) on:

* The development of policies guiding virtual schools, supplemental online courses, education technology, and other matters related to virtual education.
* The identification of best practices to encourage online education to complement classroom instruction in district schools.
* The assessment of the appropriateness of the fee that the Department of Elementary and Secondary Education (DESE) may retain for the administration of the virtual school program.

The law specifies that the DLAC include representatives from various statewide education organizations, districts and schools including virtual schools (i.e., teacher, administrator, parent), higher education, and non-profit and technology companies. The current DLAC includes a broad range of experts who meet these criteria.

# II. Work of the Council in 2020-21

During the 2019-20 school year, the DLAC spent considerable energy providing advice to DESE and the commissioner on how best to support school districts interested in delivery of remote and online learning during the COVID-19 pandemic.

Similarly, the DLAC spent the 2020-21 school year primarily focused on addressing remote learning challenges in response to the COVID-19 pandemic. The DLAC discussed topics ranging from connectivity for all students and families, support for districts regarding accessibility and assistive technology, tools for families, professional development for remote learning, sustainable and equitable access to digital learning opportunities, education technology spending, child safety, as well as pedagogical best practices.

The DLAC met five times during the 2020-21 school year. Members were deeply engaged in sharing experiences from the field, surfacing issues, and problem solving. At the March 3, 2021 meeting, the DLAC brainstormed and documented concerns about long-term sustainability of equitable access to digital learning beyond 2020-21 for the following areas:

* Internet Access
* School Network Infrastructure
* Learning Management System/Platform
* Assistive Technology
* Digital Learning Tools
* Device Management, Maintenance, and Repair and Replacement
* Professional Learning
* Staffing
* Family Engagement
* Devices and Accessories
* Students and Digital Literacy

The group articulated these issues, listed current practices in response to those issues, and suggested sustainable practices for the future to address these issues. Please see **Appendix A** for more detailed information.

# III. Council Details

**Department Administrator:** Alison Bagg, Director of the Office of Charter Schools and School Redesign

**Co-Chairs:** Angela T. Burke and Elizabeth Tripathi

**Members of the 2020-21 DLAC:**

* Amanda Huggon-Mauretti, parent of a student currently attending a virtual school in Massachusetts
* Amy Michalowski, Dean, The Virtual High School
* Andrea Wadsworth; Former Assistant Superintendent of Business and Finance, Mt. Greylock Regional School District
* Angela T. Burke, Director of Professional Services, Collaborative for Educational Services
* Bill Silver, Director of Information Communication and Technology Services, Chelmsford Public Schools
* Daniel Murphy, Director of Education Policy and Programs, American Federation of Teachers-Massachusetts
* David O’Connor, Founding Executive Director, MAPLE Consortium
* Elizabeth Tripathi, Education Policy Specialist, Massachusetts Teachers Association
* Jared Perrine, Director of Technology, Narragansett Regional School District
* Keith Ford, Assistant Principal, Needham High School
* Lynn McCormack, Software Engineer, Center for Applied Special Technology
* Patrick Larkin, Assistant Superintendent, Burlington Public Schools, (Massachusetts Association of School Superintendents)
* Robert Reilly, School Committee Member, Northern Berkshire Regional Vocational Technical
* Sarah Haavind, Senior Research Project Manager, The Concord Consortium
* Sarah Kyriazis, Manager of Instructional Technology and Digital Learning, Worcester Public Schools

**Council Meeting Dates:**

September 30, 2020; November 18, 2020; January 27, 2021; March 3, 2021; and May 5, 2021.

# IV. Appendix A – Digital Learning: Sustainability and Equity

| **Topic** | **Issue** | **Current practice** | **Sustainable practice** |
| --- | --- | --- | --- |
| **Internet Access** | * The cost is too high.
* The bandwidth is limited.
* There are problems with congestion.
* Internet is sometimes unreliable.
* There are a variety of issues that create barriers to broadband access in schools and homes (limited Income challenges, urban/rural area access issues).
* Some teacher’s internet is unstable.
* There are some broadband providers with city monopolies.
 | * Provide hotspots to students and staff.
* Single Payer for broadband (Issue: many addresses are not qualifying).
 | * For urban areas, work with internet providers to host hot spots all over the town, that are free to use for students.
* For rural areas, obtain the funding to build out the last mile infrastructure so that all homes have access to high speed internet.
* Rights to access internet in homes with students. May include providing no-cost internet access in public housing, Section 8, shelters, and/or other state/federal funded housing programs.
* Possibility of municipal broadband.
* Use federal funding.
 |
| **School Network Infrastructure** | * Proliferating devices (including personal ones) will constantly put pressure on Wi-Fi bandwidth. We need to find a long-term approach to funding enhancements on a regular, possibly annual basis.
* Many schools have old buildings/facilities.
* There is limited bandwidth; this is a growing need.
 | * Many districts wait to upgrade Wi-Fi until (1) there is a problem or (2) the building is being renovated.
 | * Current Wireless Access Points (WAPs) can support about 75+ simultaneous connections. One WAPs per classroom should alleviate the issue with personal devices.
* Ensure that network infrastructure is updated on a regular basis (at least every 5 years) - this is a combination of e-rate and local spending.
* Assist schools with basic firewall support so that we can ensure that schools networks are always accessible Distributed denial of service (DDoS) (DDoS mitigation, etc.)
* Wi-Fi access at school should be 802.11x based. No Guest connections for students. They are not guests. It is simple to set up Active Directory authentication for this.
* Next school year schools/districts will need to increase bandwidth with an increase of users in the building.
* Management of the network is a balance between higher level support services and district support services funding needs to be in place to ensure this continues.
* Annual evaluation of bandwidth requirements and upgrade of building Wi-Fi for new demands.
 |
| **Learning Management System (LMS)/Platform** | * It is important to provide students with a central location to access instructional materials, assignments, turn in work, receive feedback and grades, and communicate with peers.
* It is important to have district wide expectations for use.
 | * Countywide collaboration with an LMS, Canvas. Funding has been raised to continue collaboration for two more years as a tool for the schools. Eight out of eleven schools participated.
* Many schools just purchased a simple LMS. It is important to purchase products with training provided.
 | * This can be sustainable if folded into budget planning for future years.
* Creates a hub for shared learning and professional development for faculty. They can share lessons and especially help specialists.
* State procurement and purchasing could capitalize on economies of scale for pricing, Professional Development (PD) and it would be easier for students and teachers as they move from district to district. Lessons can easily be shared across the state and schools could more easily collaborate with each other.
* MA shared repository of digital lessons and objects organized by curriculum standard but searchable by other criteria (e.g. common textbooks in use, accessibility, etc.), to which teachers can contribute as well.
 |
| **Assistive Technology (AT)** | * Not all tools/applications work with AT.
* There is a need for AT training for teachers and administrators.
* AT staff know more about low incidence cases than Tier 1 using technology.
* There is limited guidance or best practice resources written for school-level practitioners.
* There is a need for training for paraeducators who work with students who use assistive technology.
 | * Some districts purchased “read/write” but need funding to sustain.
* Tech coaches have been meeting with AT staff to start to collaborate, and better understand student issues.
 | * AT testing should be part of all new tools/application purchase processes
* Possibly have more in-house AT, many of the consultants for this seem to recommend whatever they have used in the past.
* Understanding the tools used in the district could have positive impacts on proper selection of AT tools.
* Ongoing training and PD on assistive tech tools embedded or native to LMS systems and learning platforms.
* Certain Universal Design for Learning products such as screen readers, voice to text and predictive word processing should be accessible for all students as the base products of a tech like the device itself. All staff should be trained on how to use these tools.
 |
| **Digital Learning (DL) Tools** | * Educators are overwhelmed by an abundance of digital tools, as well as keeping up with new ones.
* Tools can create privacy/security issues if not properly vetted and configured.
* DL Tools may not be accessible (e.g., screen readers, mobility requirements, timers, enlargement etc.) to all students.
* It is a challenge to manage student data privacy for these resources.
 | * Some tools have been vetted for security/privacy by MA Data Privacy Alliance.
 | * Expand [CURATE](https://www.doe.mass.edu/instruction/curate/)
* DESE should provide a listing of vetted/reviewed products or provide a template for districts to use to vet digital learning tools and products.
* Any vetting or approval should include a rating against standards for accessibility, data privacy, curriculum alignment, device compatibility, bandwidth requirements, integration with LMS and Student Information systems and other emerging areas as identified by stakeholders.
 |
| **Device Management, Maintenance, and Repair and Replacement** | * How to increase staff knowledge/capacity.
* How to access funding to support device management, maintenance, repair, and replacement.
* Time.
* Many districts do not have enough technical staff for the increase of technology use.
 | * In-house repair. Training for technical staff to help run management systems. Set up a repair class at high school and use the students who complete the class as repair folks.
 | * Line item sustainable budgeting for a baseline of staff and equipment.
* Create statewide plan/program to train students to repair and support devices, this addresses workforce development goals as well as some chapter 74 programs - schools are perfect intern locations for our students to practice their newly learned skills.
 |
| **Professional Learning** | * Time for professional learning is limited.
* There are licensing challenges.
* There are unclear and non-uniform career paths, training, and certification for digital learning coaches and specialists.
* PD budgets especially for effective digital learning are too small and often cut.
* Instructional Technology Specialist Teacher License.
* Professional learning needs to be ongoing - things change all the time, and new skills are needed all the time.
* There is often a lack of integration of tech/curriculum.
* Limited programs for teachers to add Instructional Technology Specialist (ITS) teacher license approved by licensure office. Teachers do not pursue license or work off Commuter science license.
* "Remote learning" practices adopted on emergency basis are not necessarily the best practices for "online learning"/digital learning.
* Principals need to prioritize/build skills related to online learning.
 |  | * We have our iPrincipal and iAP cohorts to help us with leadership skills.
* Extended paid school day for teachers to allow for PD and common planning.
* Encourage schools to utilize the Professional Learning Community (PLC) model for technology learning and award PD points for it.
* Prioritize additional pathways - include district-based approvals - for ITS teacher license.
* Staff drop-in help hours (virtual).
* PD on developing ALT text for screen readers - particularly in science/social studies where graphics commonly provide essential information.
* Work with teacher prep programs to offer courses on products that are actually used in schools. Change outcomes for all courses to include tech skills embedded as a part of student assessments for the courses.
* Year-round teacher contracts for two months of planning and preparation paid.
* Incentivize professional learning related to digital literacy and instructional technology in licensure. (e.g. Professional Development Plans (PDP) or applying coursework to license applications)
* Train the trainer program.
* Require a certain number of technology-based PDPs required for re-licensure.
 |
| **Staffing** | * Wealthy suburban districts often have Directors of Innovation to help identify and support change. Lower-income districts need this support too.
* There needs to be a district leader who understands all the moving components and complexity of Educational Technology in our schools.
* There are not enough technology coaches.
* There is not enough IT support.
* There is a need for expert tech tool/resource curators.
* You end up having IT leaders making education decisions and Education leaders making IT decisions.
* Finding specialized staff – (i.e., a technology coach who understands Special Education).
* Not enough PD coaching - one-off workshops do not change practices. Virtual coaches for digital learning (technological pedagogical content knowledge) is needed.
 | * The use of in-house teachers and ITS for professional development extends the learning beyond formal training.
* Current Practice: Most tech staff work a minimum of 40-60 hours per week and most work weekends as well.
* A typical enterprise network that supports even 200-500 users has at least three network admins, a security admin, and a handful of techs. Districts with over 5,000 users have a fraction of the support staff.
* This is a two-prong issue - one is the support of the infrastructure the other is the support for the teachers. We need both staffed adequately to achieve success.
 | * Train the trainer (teacher leaders).
* Requirements of at least one Full Time instructional tech person per x number of staff at school.
* Regular end of school year PD on new technologies (so teachers can use summer to practice).
 |
| **Family Engagement** | * Schools not always inviting places for parents /guardians of students who struggle.
* There are language barriers for some families.
* There is a lack of understanding about how to navigate the system.
* There are some transportation issues that limit family engagement.
* There are some childcare issues.
* There are some work hours issues that limit family engagement.
 | * Purchased Google Voice.
* Live closed captioning.
* Purchased enterprise Zoom.
* Talking points (texts sent to parents in home language)
* Parents have enjoyed being able to meet teachers/admins virtually this year. Participation seems higher.
* Online conferences were used this year, and it was very well received by parents and teachers. We plan on continuing this practice.
* Created "Microsoft Live Events" for school recruiting. Both live and recorded for parents to access the presentation later. It was very successful.
 | * Virtual meetings have improved family engagement and has been a bright spot in the pandemic.
* Collaboration with community organizations.
* Live translation services.
* Added district app.
* Principals and teachers report that they have never had so many families attending things like “know your school night”, Individualized Education Program (IEP) meetings, and site council since they are now virtual.
* Make virtual teacher-parent conferences a regular occurrence to sustain parent involvement (and accommodate their work schedules).
* IEP Teams could continue to have virtual IEP meetings.
* Districts and schools could provide websites with translations specifically for caregivers with videos and quick guides.
* Schools and districts could provide multiple forms of communication: text messages, email, social media, WhatsApp, and notes in backpacks.
* Provide regular open office hours for parents.
* Provide virtual drop-in hours for tech help in multiple languages.
* We hired a technology coach who speaks Spanish and Portuguese.
* Record tech seminars, post and promote.
* Live drop in tech help for families in multiple languages.
 |
| **Low Technology/Low screen time (ensure that students have no screen time activities)** | * A lot of teachers initially started to deliver instruction the way they delivered face to face, but quickly realized they had to change practice. School districts did not have the luxury to develop meaningful PD around teaching online.
* Student and staff eye strain, headaches, and physical pain from using screens with improper seating, workspaces, or lighting conditions.
 | * Teachers design lessons for the online classroom and troubleshoot with families on how to access them.
* Teachers delivering packets of materials to students' homes.
 | * Build “Brain Breaks” into school schedules.
* Design lessons with dual accessibility. All assignments posted to online classrooms can be converted to hard copy. Send to students at the outset of each unit for flexible use.
* Professional development for teachers to learn how to balance the resources they learned over this past year. Funding and the support of leadership will be important.
* Intentional reflection on the amount of screen time students have each day when in school.
* Use textbooks and print resources alongside digital learning tools.
 |
| **Devices and Accessories** | * There is limited funding.
* Schools and districts don’t always have powerful devices or accessories.
* These are not sustainable.
* There are not enough devices for when we come back face to face.
* In some countries the department of education determines the 1:1 for students, and it has been successful.
 | * The district gave devices to students who did not have a laptop.
* Admins/teachers scramble to provide devices and accessories, and sometimes substitute with old technology.
 | * Building a budget to support 1:1 moving forward.
* See Kentucky Educational Technology Master Plan.
 |
| **Students – Digital Literacies** | * Lack of staffing for classes that focus on digital literacies.
* Some parents do not have the skills to help their children in this area.
* Focus is too much on programming and not enough on digital citizenship.
* Hard to find qualified ITS teachers to teach.
* Foundational skills in digital literacy and computational thinking not provided in most elementary schools.
 | * Offered training sessions at the beginning of the year for all students but this was an abbreviated version of what they really needed to know.
* Quickly developed an internal training program.
* Trying to do more training on International Society for Technology in Education (ISTE) standards.
 | * Have MA adopt the new ISTE standards in addition to the Digital Literacy/Computer Science Standards (DLCS).
* DLCS needs to begin in K and continue right through the entire student career.
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1. <http://www.malegislature.gov/Laws/SessionLaws/Acts/2012/Chapter379> [↑](#footnote-ref-2)