Digital Learning & Technology Integration Plan

Presentation to the Lowell School Committee - February 16, 2022

LOWELL
PUBLIC SCHOOLS

Agenda

Introduction

District Mission, Vision, & Core Beliefs

Digital Learning & Technology Integration Goals

Actions and Activities

Immediate Next Steps

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Introduction

Technology Plan Creation Process

The Lowell Public Schools purpose for creating a digital learning plan is to ensure that all students have access to technology and to prepare students with the skills and knowledge needed to succeed in the K-12 setting and after they graduate high school. The plan will be a phased approach with steps to include standard review, professional development, infrastructure and needs assessment from staff, students and families. It is the district's intent to ensure that the digital learning plan is fully integrated into the District Strategic Plan and driven by the IT Department and the Office of Teaching and Learning. The IT Department and the Office of Teaching and Learning will continue to collaborate with all external and internal stakeholders to adjust and maintain the Digital Learning Plan.

The following is a list of steps taken to create this plan:

1. In March of 2019 a District Technology Advisory Committee was created and tasked with the following objective: ***Create a digital learning plan that outlines a vision for impactful technology integration in our school system and the action steps to achieve the vision.***

2. **Formation of Committee**. In February of 2021, a small working group that included representation from elementary, middle and high school, the Curriculum Department and Special Education Department, and IT.

3. **Small Technology Working Group completed the following work**:
   - Reviewed budget and inventory to ensure 1 to 1 distribution
   - Reviewed technology infrastructure
   - Gathered information on curriculum needs
   - Completed a review of technology plans from other MA School Districts
   - Conducted a needs assessment
   - Gathered data on the current state of technology hardware and infrastructure in the school district

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Committee Members

Committee Member Name	Position
Robin Desmond	Chief Academic Officer
Gregory Limperis	Director of Technology
Michael Lovato	Former Director of Special Education
KC Nelson	Network Manager
Jason McCrevan	Principal at Washington Elementary School
Matt Stahl	Principal at Wang Middle School
Ashley Pennell	Former Assistant Director of Special Education
Carolyn Rocheleau	Coordinator of Special Programs
Elaine Santelmann	Coordinator of Science and Social Studies, K-12
Kara Wilkins	District Integration Technology Specialist
Katie Mahoney	Teacher at Wang Middle School
Kerien Driscoll	Teacher at Washington Elementary School
Malinda Pires	Instructional Technology Specialist (LHS)
Michael Hoppe	Former Helpdesk Manager
Stephen Gervais	Academic Chair ESL & World Languages (LHS)

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Mission, Vision, & Core Beliefs

District Mission

Technology will be used to provide authentic teaching and learning experiences for all stakeholders. Teachers, leaders, staff, and students will all utilize technology authentically to enhance teaching and learning. Students will leave the Lowell Public Schools with the digital skills, knowledge, and thinking necessary for careers of the future.

District Vision

The Lowell Public School District believes in the power of digital learning and technology integration to ensure the highest level of equity, instruction, and student empowerment. Digital learning promotes the 21st century skills of critical thinking, collaboration, creativity, and communication, and supports students with becoming lifelong learners and contributors to society. All students, including historically underrepresented groups, should be actively engaged in designing, creating, inventing, discussing ideas, and applying skills. Fully integrating digital learning across the curriculum will close the “digital divide” by providing equal access to knowledge, skills and opportunity. Students will leave the Lowell Public Schools with the digital skills and thinking necessary for careers of the future.

Core Beliefs

- A high-quality education is a fundamental civil right of every child.
- Teaching and Learning is the core of our work.
- Families are students’ first teachers.
- Sustainable school improvement requires hard and steady work over time.
- Every adult in the system is accountable for the success of all students; the entire community is responsible for their success.

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Digital Learning & Technology Integration Goals

Focus Area	Goals
Teaching & Learning	All learners will have engaging and empowering learning experiences that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society.
Leadership	School and district leaders will promote a shared vision of how technology can support and enhance leading, teaching, and learning.
Family Support & Involvement	Families will be supported with navigating a technological world with resources to best assist in child development and learning.
Assessment & Data	The power of technology will be leveraged to measure what matters and use assessment data to improve learning.
Infrastructure & Accountability	All students and educators will have access to a robust and comprehensive infrastructure when and where they need it for learning.

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Teaching & Learning

Goal: All learners will have engaging and empowering learning experiences that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society. (Adapted from NETP, 2017)

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
TL1. .Continue to provide easily accessible training opportunities for teachers.	a. Ensure all teachers know how to access the LPSD Instructional Technology Corner website. b. Set up a system for teachers to request content to be added to LPSD Instructional Technology Corner. c. Set up a system for schools and teachers to request training from the District Integration Technology Specialists (DITS). d. DITS collaborate with district curriculum specialists to provide model videos of how to connect technology and content.	District Integration Technology Specialists	a. Teachers are accessing and using LPSD Instructional Technology Corner Website. b. Teachers are requesting and receiving training. c. Instructional and model videos related to content instruction are available on the LPSD Instructional Technology Corner Website.	SY22 Re-evaluate and adjust each school year.
TL2: Design and implement professional learning opportunities to support teachers in the use of a Learning Management System.	a. Provide tiered professional development for teachers to enhance their use of the adopted Learning Management System. b. Create a committee to outline expectations to align the use of learning management systems across grade levels.	District Integration Technology Specialists	a. Teachers are proficient with use of the adopted LMS b. The use of the LMS is aligned across grade levels.	SY22 Re-evaluate and adjust each school year.
TL3: Implement training to support teachers in their continued use a monitoring program.	a. Provide tiered professional development for teachers to enhance or begin their use of a monitoring program.	District Integration Technology Specialists	Teachers are proficient with use of the adopted monitoring software	SY22 Re-evaluate and adjust each school year.

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Teaching & Learning

Goal: All learners will have engaging and empowering learning experiences that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society. (Adapted from NETP, 2017)

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
TL4: Provide subscriptions, vetted resources, and technology-ready curriculum for teacher use.	a. Analyze district subscription data and survey staff to determine what apps/programs/etc. are being used consistently. b. Research best practices in using technology for different grade levels and content areas. c. Update current curriculum with suggestions of how to incorporate technology meaningfully. d. Create a data dashboard to keep track of all DLCS program purchases both at the district and school level.	District Integration Technology Specialists Curriculum Coordinators	a. A comprehensive list of all apps and programs is used consistently. b. Coaching sessions and instructional rounds on technology integration. c. Curricular adjustments that incorporate technology. d. Dashboard created.	SY22 Re-evaluate and adjust each school year.
TL5. Integrate Massachusetts Digital Learning and Computer Science Standards (DLCS) into the core content curriculum. **DESE's DLCS Framework**	a. Implement DLCS curriculum (from DESE grant). b. Develop content area committees to determine how to integrate DLCS into core content and Allied Arts. c. Content area committees create training for use on Early Release Days around DLCS. d. New Teacher Academy presentations around DLCS.	District Integration Technology Specialists Curriculum Coordinators	a. Lesson plans include integration of DLCS content b. Some early release days are dedicated to DLCS curriculum c. New Teacher Academy includes DLCS in their orientation process.	a. SY22 b. SY24 c. SY24 d. SY26

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Teaching & Learning

Goal TL2: Educators will integrate technology into the classroom to create experiences that advance student engagement and learning and create tasks that were previously inconceivable. (Adapted from NETP, 2017).

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
TL6. Professional development for teachers is focused on the pedagogy of digital learning to advance student engagement and create tasks that were previously inconceivable..	a. Provide professional development on the SAMR Model. b. Year 1: PD focus on Substitution & Augmentation. c. Year 2: PD focus on Augmentation & Modification. d. Year 3: PD focus on Modification & Redefinition	Office of Teaching and Learning	SAMR is included in the district Professional Development Plan.	SY26 Re-evaluate and adjust each school year.

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Leadership

Goal: School and district leaders will promote a shared vision of how technology can support and enhance leading, teaching, and learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
L1. Communicate district vision for 1:1 technology incorporation and the possibilities for the enhancement of teaching and learning.	a. Present district technology plan and vision to staff at the start of the school year. b. Encourage school leaders to include steps to promote vision in professional goals. c. Present vision to families in community forums. d. Spotlight schools who are exemplifying innovative use of technology.	Chief Schools Officer Principals	a. District leaders have presented the district technology plan and vision to staff. b. School leaders promote the vision with staff consistently. c. Community forums are held and students receive 1:1 devices. d. District will place spotlight on excellence on schools that are exemplifying innovative uses of technology.	a. SY23 b. SY23 c. SY24 d. SY23 Re-evaluate and adjust each school year.
L2. Use data from a Technology Self-Assessment Tool (TSAT) to identify needs and inform development of high quality professional development opportunities.	a. Create a TSAT survey on a Google form for teachers and principals to self-report their knowledge on the DESE domains of Computing & Society, Digital Tools & Collaboration, Computing Systems, and Computational Thinking. b. Analyze survey data to determine site-based needs and focus areas. c. Create a district-wide differentiated professional development plan based on needs and focus areas. d. Provide PD opportunities for building leaders to ensure they are competent in the essential technology tools.	Office of Teaching and Learning Principals	a. District-created TSAT Google form will be distributed for use. b. Results of TSAT survey shared with principals to determine needs and focus areas in their building.. c. School professional development plans aligned with needs identified by TSAT results.	a. SY23 b. SY23 c. SY24 d. SY24 Re-evaluate and adjust each school year

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Leadership

Goal: School and district leaders will promote a shared vision of how technology can support and enhance leading, teaching, and learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
L3. Explore the use of school-wide professional and student learning goals that support the district technology plan.	a. Support educators in their drafting and implementation of professional and student learning goals related to technology integration. b. Connect educators with similar goals across the district. c. Recognize innovative and literate technology use in teaching and learning as a district "look for" in observations.	Principals Office of Teaching and Learning	a. Teachers will be given the option to incorporate technology integration into their Professional Practice and Student Learning Goals. b. Teachers with goals related to technology will have the opportunity to collaborate. c. A list of consistent and effective uses of technology will be available to school leaders and can be used during classroom walkthroughs.	SY24 Re-evaluate and adjust each school year
L4. Strengthen the use of technology to communicate, collaborate, and create.	a. Effectively utilize video conferencing platforms to collaborate with other leaders within and beyond the district. b. Utilize the technology tools that staff members are using during leadership meetings and work, when applicable to enhance understanding.	District Leadership Principals	a. A variety of technology platforms will be used to expand collaboration beyond typical school walls. b. Platforms and technology tools used by teachers in the classroom are also used by leaders throughout the school.	SY24 Re-evaluate and adjust each school year

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Leadership

Goal: School and district leaders will promote a shared vision of how technology can support and enhance leading, teaching, and learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
L5. Collaborate with knowledgeable staff to gain personal knowledge and experience with learning technologies to understand how to deploy resources effectively.	a. Dedicate time to meet with teachers who have used technology effectively, and promote the use of teacher leaders of technology in each school. b. Create and implement personalized school goals related to technology by collaborating with District Integration Technology Specialists, and incorporate goals into School Improvement Plans. c. Try out new technology tools or strategies with teachers in your building.	Principals	a. Collaboration time established in schedules to discuss and observe best practices of technology integration. b. Individual school improvement plans will incorporate effective strategies for technology integration within their classrooms. c. Cultures and forums will be established to allow teachers to experiment with new technologies.	SY24 Re-evaluate and adjust each school year
L6. Dedicate time during leadership meetings to review the Massachusetts Digital Literacy and Computer Science Framework, and gain greater understanding of effective use of technology in leading, teaching, and learning.	a. Prioritize learning the Massachusetts Digital Literacy Framework as part of Leadership. b. Use leadership meetings to research best practices related to technology integration. c. Create cross-school groups to model effective uses of technology.	Chief Schools Office Principals	a. Massachusetts Digital Literacy Framework will be incorporated into agendas for leadership meetings throughout the district. b. Forums will be established at leadership meetings to discuss, analyze, and identify best practices of technology integration within buildings. c. Instructional rounds will include multiple schools focusing on best practices in technology integration.	SY24 Re-evaluate and adjust each school year

Family Support & Involvement

Goal: Families will be supported with navigating a technological world with resources to best assist in child development and learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
F1. Families will be able to access and understand student grades consistently throughout the school year.	a. Review Student Information System (SIS) data for accuracy so family portals can be utilized effectively. b. Open student portal to access report cards and progress reports. c. Provide parent sessions to explain common assessments and how to access them.	The Office of Research and Accountability Family Resource Center Principals	a. Families are able to utilize the SIS portal effectively. b. Parent forums are held at the district and school level.	SY23 Re-evaluate and adjust each school year
F2. Families will communicate with staff members through a consistent communication tool.	a. Research the most secure and efficient tools for communication with families b. Survey what is currently being used in schools.. b. Provide schools with training for adopted communication tool.	Office of Teaching and Learning Principals	a. One consistent communication tool is chosen and used district wide. b. Staff and parents are familiar with use of the tool.	SY23 Re-evaluate and adjust each school year
F3. Families will understand how to view and interact with their child's digital portfolio.	a. Parents will be able to log into and navigate the digital platform that corresponds with their child's grade level. b. Parents will be able to interact with their child's digital work.	Teachers Literacy and Instructional Specialists, Math Coaches	a. Two-way digital conversations between parents, educators, and students	FY25 Re-evaluate and adjust each school year

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Assessment & Data

Goal: The power of technology will be leveraged to measure what matters and use assessment data to improve learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
AD1. Summative assessment data will be stored on a Student Information System (SIS) dashboard to allow for consistent calibration and analysis.	a. Provide professional development on SIS to teachers and clerks.. b. Develop and create a data dashboard to combine multiple data points for easy visual analysis and comparison. c. Align schools' use of SIS to ensure data is available for all schools. d. Open up parent portal as needed.	The Office of Research and Accountability The Office of Teaching and Learning	a. Professional development plan created and implemented. b. Data dashboard created and synced to SIS (potentially utilizing Google Workspace for Education Plus to create that bridge) c. Expectations of SIS use are created and implemented	SY23 Re-evaluate and adjust each school year
AD2.: Formative assessment data will be stored on Learning Management System for consistent calibration and analysis.	a. A Learning Management System (LMS) will be utilized to track student formative data throughout the year. b. Provide tiered professional development for gradebook use in the LMS..	The Office of Research and Accountability District Integration Technology Specialists	a. Consistent systems developed and implemented. b. Teacher expectations developed. c. Professional development plan created and implemented.	SY24 Re-evaluate and adjust each school year

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Accountability & Infrastructure

Goal: All students and educators will have access to a robust and comprehensive infrastructure when and where they need it for learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
AI1. All school buildings will have the network capability to support high quality digital learning.	a. Assess the district needs for reliable network and internet access. b. Monitor all bandwidth and throughput using monitoring tools. c. Update firewall and ISP. d. Work with Facilities Department to get all schools' data closets connected to a generator, and approach the City for funding for a capital improvement plan for generators. e. Maintain and replace UPS's and their batteries on a regular schedule.	Director of Technology	a/b/c. Reports are analyzed from current monitoring tools. d/e. Plan is created to obtain generators.	SY23 Re-evaluate and adjust each school year
AI2. All students in K-12 will be provided with a 1:1 device.	a. District will develop a system for acquiring new devices so students will always have an up-to-date device. b. District will seek out available grant opportunities. c. Repairs will be done in-house by hiring an additional full time staff member D. A refresh cycle of no more than 4 years will be established. e. Digital Technology Plan will be supported in the district budget.	Director of Technology	a. A clear system for device acquisition and deployment is developed and communicated to school leaders. b. Grant opportunities are consistently applied for. c. Extra parts are kept on hand with additional devices d. The budget reflects the goals of the Digital Technology Plan.	SY23 Re-evaluate and adjust each school year
AI3. All staff will be provided with updated devices.	a. Establish a refresh cycle of no more than 5 years for teacher devices.. B. Teachers and Paras will be given laptops. c. Tutor will be given Chromebooks d. Purchase clerk and custodian devices.	Director of Technology	a/c. Budget decisions continually support these purchases. b. Devices will be sold or recycled and any revenue generated will be returned to the General Fund.	SY23 Re-evaluate and adjust each school year

Accountability & Infrastructure

Goal: All students and educators will have access to a robust and comprehensive infrastructure when and where they need it for learning.

District-Wide Strategic Initiative	Actions & Activities	Responsible Individuals	Evidence of Progress	Timeline
AI4. Develop and implement clear policies for technology management.	a. Develop a plan for cyber security and accountability security breaches. B. Purchase the necessary protection against Ransomware and cyber attacks. c. Develop protocols for administrators to respond to SEL concerns emerging from the monitoring system.	Director of Technology	a. Cyber security plan is developed and implemented. b.Administrators know how to respond to alerts from the monitoring system.	SY23 Re-evaluate and adjust each school year
AI5. Adopt an Acceptable Use Policy (AUP) that establishes consistent expectations for students and staff regarding digital safety and security.	a. Research AUPs from our own and other districts. b. Write a policy that reflects our current 1:1 environment c. Distribute to anyone receiving a computer and require signature upon receiving a device.	Director of Technology	Policy is distributed to and used by all staff and students.	SY23 Re-evaluate and adjust each school year
AI6. Explore the need for cutting edge instructional technology equipment such as robotics, AR/VR. etc.	a. Assess needs of teachers for cutting edge technology. b. Research innovative ideas by attending and new teaching methods by attending conferences. c. Solicit competitive quotes	Director of Technology	Students have the technology they need for creative innovative solutions to problems.	SY25 Re-evaluate and adjust each school year

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Current Staffing

- Director of Technology - added for the 2021-2022 school year
- Software Specialist
- Network Administrator
- Assistant Network Administrator
- helpdesk technician
- 4 - full time technicians
- 2 - part-time technicians - added spring of 20201
- 4 - Instructional Technology Specialist - realigned to the technology department for the 2021-2022 school year

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Immediate Next Steps

- Add 2 additional part time positions to support equipment repairs
- Assess and update network capability, including generator backup
- Acquire new devices for grades 1, 5, and 9 to maintain 1:1 environment
- Acquire ClearTouch panels for additional classrooms
- Develop protocols for cyber security and response plan
- Update application and program dashboard
- Continue to provide in-school technology professional development
- Develop and implement Acceptable Use Policy

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