

Virginia Board of Education Agenda Item



Agenda Item: J

Date: January 26, 2017

Title	Report on the Timeline and First Draft Outline for the <i>Educational Technology Plan for Virginia: 2017-2022</i>		
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Purpose of Presentation:

For information only. No action required.

Previous Review or Action:

No previous review or action.

Action Requested:

No action requested.

Alignment with Board of Education Goals: Please indicate (X) all that apply:

	Goal 1: Accountability for Student Learning
	Goal 2: Rigorous Standards to Promote College and Career Readiness
	Goal 3: Expanded Opportunities to Learn
	Goal 4: Nurturing Young Learners
	Goal 5: Highly Qualified and Effective Educators
	Goal 6: Sound Policies for Student Success
	Goal 7: Safe and Secure Schools
X	Other Priority or Initiative. Specify: Board of Education <i>Comprehensive Plan 2017-2022</i>

Background Information and Statutory Authority:

This item addresses the requirement that the Board of Education Comprehensive Plan include a long-range plan for technology integration consistent with or as part of the Plan. The next educational technology plan for Virginia will be aligned with and supportive of the Board of Education *Comprehensive Plan 2017-2022*. In so doing, the Department will develop an educational technology plan that will provide guidance to the school divisions as they develop their own local technology plans.

§ 22.1-253.13:6. Standard 6. Planning and public involvement.

A. “The Board shall also develop, consistent with, or as a part of, its comprehensive plan, a detailed comprehensive, long-range plan to integrate educational technology into the Standards of Learning and the curricula of the public schools in Virginia, including career and technical education programs. The Board shall review and approve the comprehensive plan for educational technology and may require the revision of such plan as it deems necessary.”

The Commonwealth's first long-range technology plan was the *1988-1994 Six-Year Technology Plan for Virginia*. Three long-range plans have been produced since then with the most recent plan being the *Educational Technology Plan for Virginia: 2010-2015* (the other two were 1996-2002 and 2003-2009). The *2015-2017 Addendum to the Educational Technology Plan for Virginia 2010-2015* was approved by the Board in June 2015.

Generally, these plans have been developed apart from the Board's *Comprehensive Plan*. Treating technology separately from other educational priorities made sense in the earlier days, when a specific focus on educational technology was needed to give technology a greater presence in the classroom environment. Educational technology meant that schools had a few computers, a couple of modems and a few enthusiastic teachers who used technology for special projects. It also made sense because technology demands a systemic view-one must consider a variety of things such as infrastructure, device compatibility, and professional development in order to support the use of technology in learning.

However, since then technology has become more and more a part of every facet of schooling, from scheduling school buses to scheduling student classes, from learning how to play an instrument to learning how to communicate with other students around the world, from assessing students to introducing them to job skills. Technology is no longer a stand-alone focus and the systems that supported educational technology now support significantly more of what school divisions do. It is part of how educational goals are met.

The decisions made by the Board for their long-range technology plan impact the schools, as divisions must have a long-range plan which aligns to the state plan.

§ 22.1-253.13:6. Standard 6. Planning and public involvement.

B. "The divisionwide comprehensive plan shall include, but shall not be limited to... (vii) a technology plan designed to integrate educational technology into the instructional programs of the school division, including the school division's career and technical education programs, consistent with, or as a part of, the comprehensive technology plan for Virginia adopted by the Board of Education..."

Summary of Important Issues:

In the most recent state technology plan and its addendum, school divisions were encouraged to ensure that their technology plans were tied to their comprehensive plans. In so doing, technology was approached as a tool for supporting broad educational goals rather than narrow technology-based ends. This by no means implies that schools do not need experts, both in overseeing/maintaining technology and mentors who can help their fellow educators to effectively use technology as a learning tool. It does mean that divisions should continue to approach their use and support for technology as a systemic issue.

Attachment A provides the proposed Timeline for the *Educational Technology Plan for Virginia: 2017-2022*.

Attachment B provides the *2015-2017 Addendum to the Educational Technology Plan for Virginia 2010-2015*.

Attachment C provides a draft outline for the *Educational Technology Plan for Virginia: 2017-2022*,

developed with assistance from an ad-hoc group of internal advisors from the Virginia Department of Education.

Impact on Fiscal and Human Resources:

The Department of Education develops the Educational Technology Plan for Board review and approval. The agency's existing resources can absorb this responsibility at this time.

Timetable for Further Review/Action:

The Superintendent of Public Instruction anticipates presenting the *Educational Technology Plan for Virginia: 2017-2022* to the Board for first review in September 2017.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education receive this report.

SCHEDULE OF THE REVIEW OF THE EDUCATIONAL TECHNOLOGY PLAN FOR VIRGINIA 2017-2022

January 2017 The Department of Education presents the schedule for the *Educational Technology Plan for Virginia: 2017-2022* to the Board of Education.

The Department of Education receives feedback from the Board of Education about the preliminary outline of the *Educational Technology Plan for Virginia: 2017-2022*.

A Superintendent's Memorandum is distributed that:

- announces the schedule of the review process;
- announces the availability of a *Educational Technology Plan for Virginia: 2017-2022* review/comment page on the Department of Education's Web site;
- requests that division superintendents share information about the Web site with instructional staff; and
- requests that division superintendents use the Department of Education's Instruction Committee Appl Processing System (ICAPS) to nominate members for the *Educational Technology Plan for Virginia: 2017-2022* review team.

February 2017 The Department of Education posts on its Web site a review/comment page for *Educational Technology Plan for Virginia: 2017-2022*. The page will be active for 30 days.

The Department of Education identifies members of the review team and other stakeholders.

The Department of Education holds focus group meetings held to receive feedback from local school divisions and other stakeholders.

March 2017 The Department of Education aggregates and conducts a preliminary analysis of the comments entered on the Web page and received during focus group meetings.

The *Educational Technology Plan for Virginia: 2017-2022* review team meets to:

- analyze statewide Web page and focus group meetings input;
- review national and international documents and reports as necessary; and
- make recommendations for potential changes.

July 2017 The Department of Education prepares a draft of the *Educational Technology Plan for Virginia: 2017-2022* that reflects the review team's comments.

August 2017 The Department of Education posts on its Web site the draft of the *Educational Technology Plan for Virginia: 2017-2022* for public comment. The page will be active for 30 days.

September 2017 The Department of Education presents the draft *Educational Technology Plan for Virginia: 2017-2022* document to the Board of Education for first review.

October 2017 The proposed *Educational Technology Plan for Virginia: 2017-2022* document is distributed for public comment. The document is placed on the Virginia Department of Education's Web site for review.

November 2017 Public comment is reviewed, and revisions are made as warranted.

The Superintendent of Public Instruction presents the proposed *Educational Technology Plan for Virginia: 2017-2022* to the Board of Education for final review and adoption. The final document is posted on the Department of Education's Web site.

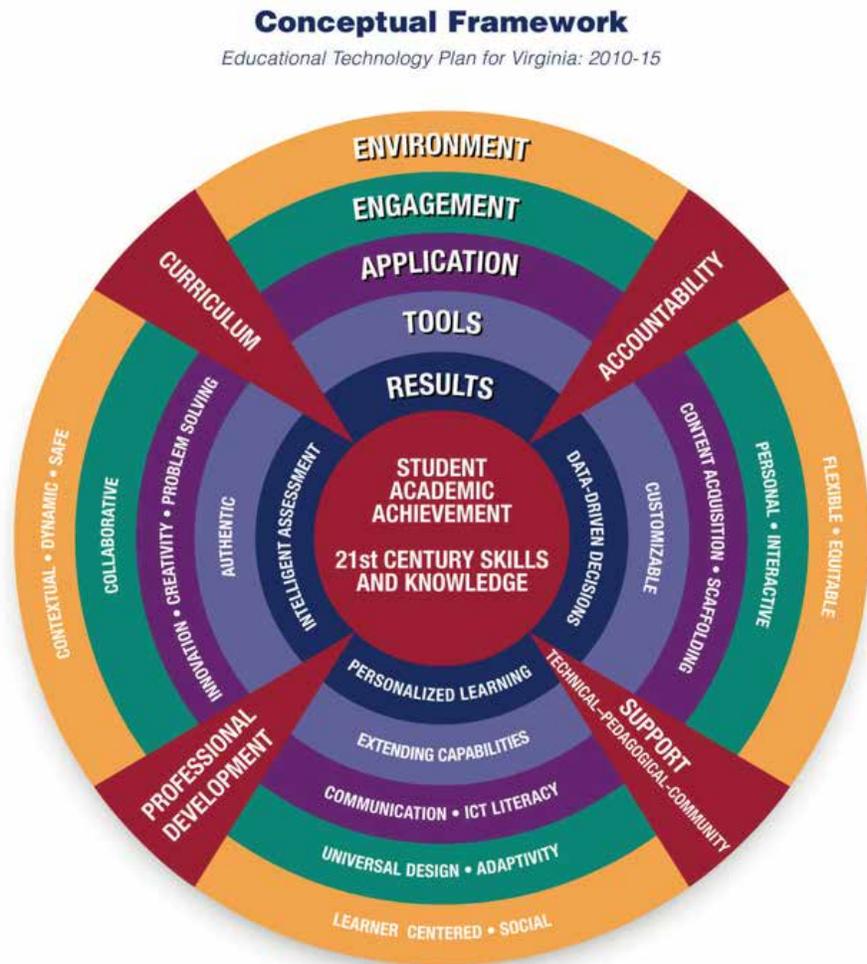
2015-2017

Addendum to the Educational Technology Plan for Virginia: 2010-2015

OFFICE OF TECHNOLOGY AND VIRTUAL LEARNING
VIRGINIA DEPARTMENT OF EDUCATION

The conceptual framework shows five focus areas for educational technology in Virginia between 2010 and 2017:

- D Schools need to consider physical and virtual environments in new and innovative ways to support learning activities.
- D Educators must employ multiple ways to engage students in learning through technology. This engagement should reflect student learning styles, cultural backgrounds, and personal interests.
- D Students need to understand the proper application of technology tools (i.e., choosing and applying the most appropriate technology for communicating and problem solving) and to be creative and innovative.



- D Students should not use technology tools just to replicate paper-and-pencil activities. Tools should extend student capabilities to perform functions that would be difficult, if not impossible, without technology. Tools should be authentic—ones students will encounter in the nonschool environment.
- D Results are not just a matter of meeting accountability requirements but using data, including real-time assessments, to inform instruction. Teachers addressing 21st century skills and knowledge must employ intelligent assessments.



Goals, Objectives, Strategies, Evaluation Strategies, and Evidence of Impact

The **2015-2017 Addendum to the Educational Technology Plan for Virginia: 2010-2015** imparts state-level goals and objectives grounded in a foundation of research and based on identified needs (see Appendix B). School divisions must develop locally appropriate strategies and measures that address these statewide goals and objectives while, at the same time, leveraging their unique strengths and minimizing the gaps between promise and practice. Beyond the goals and objectives of the state's plan, division technology committees may create effective plans by adding goals and objectives that support division missions and visions.

Virginia school divisions are practiced in the art and science of good planning procedures. Division technology plans need to follow these procedures, reflect state and local goals, and be useful to all stakeholders. With an increased emphasis on supportive data collection, divisions also must collect appropriate and useful information during the evaluation phase of the planning cycle.

Goal 1: Provide a safe, flexible, and effective learning environment for all students

Objective 1.1: Provide the technical infrastructure necessary to support formal and informal learning environments.

Strategy 1.1.1: Facilitate the implementation of 1+Mbps/student Internet and 10+Mbps Wide-Area Network (WAN) connectivity and ubiquitous, high-speed wired and Wi-Fi networks in schools. This is based on the widely accepted standard established by State Educational Technology Directors Association (SETDA).

Evaluation Strategy: Are students able to access digital resources when they need to?

Evidence of Impact: Description of state-level efforts to facilitate this objective.

Evidence of Impact: The number/percentage of schools providing 1+Mbps/student Internet connectivity and 10+ Mbps/student WAN connectivity for the 2017-18 school year increases from those providing the stated bandwidth for the 2014-15 school year.

Evidence of Impact: The number/percentage of schools with fiber optic lines as part of the technical infrastructure within schools increases from the 2014-15 school year to the 2017-18 school year.

Evidence of Impact: The number of schools with the technical infrastructure necessary to create safe and secure school environments.

Strategy 1.1.2: Work with communities for robust and sustainable networks in and out of school buildings. (Robust defined as progressing toward the SETDA bandwidth targets.)

Evaluation Strategy: Are students able to connect to the Internet outside of school?

Evidence of Impact: A list of community partnerships geared towards bringing robust and sustainable networks to localities.

Evidence of Impact: The number of communities with robust and sustainable networks in and out of school buildings increased.

Strategy 1.1.3: Require that all electronic and information technologies that are developed by the Virginia Department of Education must be accessible to people with disabilities based on Section 508 of the federal Rehabilitation Act.

Evaluation Strategy: Evaluation Strategy: Are digital materials created by the Virginia Department of Education developed with accessibility features?

Evidence of Impact: A review of digital resources provided by the Virginia Department of Education finds that they are accessible to all students.

Objective 1.2: Provide the human infrastructure necessary to support formal and informal learning environments.

Strategy 1.2.1: Fully fund and support Instructional Technology Resource Teachers (ITRTs) as specified in the Standards of Quality.

Evaluation Strategy: Do divisions that have the required number of ITRTs support more innovative teaching? (The purpose of ITRTs is to increase the pace of technology adoption and innovation.)

Evidence of Impact: List of resources and support provided by the state to reach this objective.

Evidence of Impact: The number of teachers with access to an ITRT for professional development, mentoring, and follow-up increases from the 2014-15 school year to the 2017-18 school year.

Evidence of Impact: The technology proficiency of teachers, as measured by local technology competency instruments, increases from the 2014-15 school year to the 2017-18 school year.

Strategy 1.2.2: Fully fund Technical Support Personnel as specified in the Standards of Quality.

Evaluation Strategy: Do divisions who have the required number of Technical Support Personnel have fewer technical issues in the schools which interrupt learning?

Evidence of Impact: List of resources and support provided by the state to reach this objective.

Evidence of Impact: Schools report that the timing between the occurrence of technical issues and resolution decreases.

Evidence of Impact: As reported by schools, disruptions in the use of technology because of technical issues are reduced from the 2014-15 school year to the 2017-18 school year.

Strategy 1.2.3: Fully fund Assistive Technology Resource personnel according to the federal Individuals with Disabilities Education Act (IDEA) and the Regulations Governing Special Education Programs for Children with Disabilities in Virginia.

Evaluation Strategy: Do divisions have the required number of personnel to provide any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device?

Evidence of Impact: List of resources and support provided by the Virginia Department of Education to reach this objective.

Strategy 1.2.4: Leverage public/private/nonprofit partnerships to provide professional development focused on technology integration strategies and the development of teachers' and administrators' 21st century skills.

Evaluation Strategy: Are teachers changing the way they teach using technology to take advantage of the strengths of available tools for improving learning? Are administrators changing their approaches to leading and supervising, taking advantage of the capabilities provided by technology?

Evidence of Impact: The quantity and quality of professional development opportunities for teachers and administrators increases from the 2014-15 school year to the 2017-18 school year.

Evidence of Impact: The 21st century skills of teachers and administrators continually improve as assessed by school divisions using Technology Standards for Instructional Personnel (TSIP) or local assessments.

Strategy 1.2.5: Review and Update the Technology Standards for Instructional Personnel (TSIP).

Evaluation Strategy: Do the new standards inspire teachers to expand their use of technology to take advantage of the strengths of available tools for improving learning?

Evidence of Impact: School divisions have current and relevant standards by which to measure the technology proficiency of educators.

Objective 1.3: Develop sound policies and procedures for the acquisition and management of technologies.

Strategy 1.3.1: Employ both formal and informal means to communicate with school divisions and to answer specific questions regarding policies and procedures for acquiring and managing technology, including assistive technology.

Evaluation Strategy: Are divisions who ask for help using the guidance from the Virginia Department of Education?

Evidence of Impact: Description of the extent of informal communications with divisions.

Evidence of Impact: A larger percentage of divisions are increasing their use of available resources in the acquisition and management of technology.

Strategy 1.3.2: Leverage partnerships with public entities, state agencies, state and national organizations, and private entities to support all stakeholders who are responsible for policies and procedures at the division level.

Evaluation Strategy: Are the partnerships and projects entered into being used to increase flexibility in schools?

Evidence of Impact: Description of the partnerships entered into and the results of their efforts.

Goal 2: Engage students in meaningful curricular content through the purposeful and effective use of technology.

Objective 2.1: Deliver appropriate, rigorous, and challenging technology-enhanced curricula to support formal and informal learning experiences.

Strategy 2.1.1: Expand course offerings for students through virtual and blended learning.

Evaluation Strategy: Are new course offerings providing new opportunities for more students? Are

students who could not take these types of courses before now able to take them? Are courses accessible to all students? Do Web sites meet 504 accessibility standards?

Evidence of Impact: Number of students taking courses increases from the 2014-15 school year to the 2017-18 school year

Strategy 2.1.2: Enhance Virtual Virginia courses to promote greater flexibility and engagement for learners.

Evaluation Strategy: Are students who might have dropped out in older classes staying with the newer style of classes?

Evidence of Impact: Number of students who complete newly flexible and engaging courses added to Virtual Virginia.

Strategy 2.1.3: Provide student access to Virginia Department of Education's Web-based content, tools, and collaborative spaces to enable blended learning and informal learning initiatives.

Evaluation Strategy: Are schools able to offer more blended learning classes to students who would like to take them, providing a wider choice of classes? Are students able to pursue informal learning opportunities on their own?

Evidence of Impact: Analyze use data to determine frequency of access to Web-based content, tools, and collaborative spaces.

Strategy 2.1.4: Provide student access to Virginia Department of Education's Web-based content, tools, and collaborative spaces to enable participation for students with disabilities.

Evaluation Strategy: Are courses and resources accessible for students who: are blind or vision impaired; are deaf and hard of hearing; have motor impairments; or have reading disabilities?

Evidence of Impact: Analyze use data to determine frequency of access to Web-based content, tools, and collaborative spaces by students with disabilities.

Objective 2.2: Provide resources to support personalized learning for all students.

Strategy 2.2.1: Identify and disseminate information and resources to assist schools in evaluating the interactive and universal design features of technology and digital resources.

Evaluation Strategy: Do schools make effective purchasing decisions for devices and resources that support students of all learning needs?

Evidence of Impact: Description of means that the state uses to identify and disseminate information about evaluating technology and digital resources.

Strategy 2.2.2: Provide best practices in the use of technology to personalized instruction.

Evaluation Strategy: Are divisions supporting the use of alternative and new practices for instruction for all students? Are school divisions using Assistive Technology (AT) considerations to make decisions for students with disabilities?

Evidence of Impact: Documentation of all efforts to disseminate best practices to divisions.

Strategy 2.2.3: Provide professional development support focusing on using digital resources to effectively personalize student learning.

Evaluation Strategy: Are teachers able to effectively use digital resources from various sources to personalize learning for their students?

Evidence of Impact: The quantity and quality of professional development opportunities for teachers and administrators increases.

Goal 3: Afford students with opportunities to apply technology effectively to gain knowledge, develop skills, and create and distribute artifacts that reflect their understandings.

Objective 3.1: Provide resources and applications that encourage creativity, collaboration, and problem solving.

Strategy 3.1.1: Provide resources developed by the Virginia Department of Education and in partnerships with other entities by disseminating these using the Internet.

Evaluation Strategy: Do students have access to resources that encourage creativity, collaboration, and problem solving via the Internet?

Evidence of Impact: Describe access to these resources.

Objective 3.2: Develop and evaluate technology policies to effectively balance the need for instructional innovation with safety and security.

Strategy 3.2.1: Identify and disseminate resources to help school boards and administrators develop and evaluate policies to balance safety and security issues while allowing for instructional innovation, leveraging partnerships with other statewide organizations and entities as appropriate. Ensure Internet safety programs comply with state and federal regulations while enabling students to pursue innovative ways of learning.

Evaluation Strategy: Are school divisions editing policies and procedures to balance out innovation and security/safety?

Evidence of Impact: Describe the identification and dissemination procedures that help school boards develop and evaluate technology policies.

Evidence of Impact: Records of any events that support school boards and administrators in determining best practices regarding safety and security.

Goal 4: Provide students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

Objective 4.1: Provide resources and support to ensure that every student has access to a personal computing device.

Strategy 4.1.1: Seek ways and means to provide tools that extend students' capabilities, can be customized to meet individual needs and preferences, and support learning.

Evaluation Strategy: Do students have access to tools that expand learning opportunities that meet individual needs and preferences? Do students with disabilities have access to appropriate technologies that provide comparable experiences to those received by general education students?

Evidence of Impact: Determine the frequency of personal computing device distribution, specifically (a) how personal computing devices are customized and (b) how the options for customization support learning.

Strategy 4.1.2: Provide best practices in the use of bring your own technology (BYOT) models.

Evaluation Strategy: Do school divisions implement successful BYOT initiatives resulting in expanded learning opportunities for students? Are accommodations made for students with disabilities to use their own accessible technology?

Evidence of Impact: Document efforts to provide information between school divisions regarding the use of bring your own technology initiatives.

Objective 4.2: Identify and disseminate information and resources that assist educators in selecting authentic and appropriate tools for all grade levels and curricular areas.

Strategy 4.2.1: Identify and disseminate information about new and emerging technologies, including software and assistive technology.

Evaluation Strategy: Are divisions taking advantage of new and emerging technologies that more effectively meet current and future needs?

Evidence of Impact: Describe methods of identifying and disseminating information about new and emerging technologies, including software and assistive technology.

Evidence of Impact: List of resources provided through various channels and in partnership with other statewide organizations and entities.

Strategy 4.2.2: Design and implement pilot projects to evaluate new technologies.

Evaluation Strategy: Are new technologies evaluated to determine the value that the technologies provide to teaching and learning, with results being disseminated in ways useful to school divisions? Are new technologies evaluated to determine accessibility?

Evidence of Impact: Document the processes of designing and implementing the pilot projects.

Evidence of Impact: Describe the number, types, locations, and scope/extent (breadth and depth) of the pilot projects.

Evidence of Impact: Describe how the results of pilots conducted by school divisions are shared.

Strategy 4.2.3: Leverage partnerships with private industries and other organizations to provide industry certifications with the use of technology delivery systems.

Evaluation Strategy: Do all students have opportunities to earn industry certifications through internships with private industries and other organizations? Are courses and assessments accessible for students with disabilities?

Evidence of Impact: Document the partnerships available to school divisions to provide industry certifications to students through technology delivery systems.

Goal 5: Use technology to support a culture of data-driven decision making that relies upon data to evaluate and improve teaching and learning.

Objective 5.1: Use data to inform and adjust technical, pedagogical, and financial support.

Strategy 5.1.1: Model the use of data to inform strategic plans and purchases.

Evaluation Strategy: Are school divisions using data available in division accountability systems to develop sound policies leading to student success?

Evidence of Impact: Describe how the state models data use to divisions and locales to inform strategic plans and purchases.

Strategy 5.1.2: Provide support for educators on how to use data, particularly from formative assessments, to improve teaching and learning.

Evaluation Strategy: Do teachers and administrators use data, particularly from formative assessments, to assist them in personalizing learning for students?

Evidence of Impact: Detail efforts made to disseminate information and/or professional development regarding the use of data to improve teaching and learning.

Strategy 5.1.3: Provide best practices in the use of technology to assess student achievement.

Evaluation Strategy: Do teachers and administrators use technology tools to help collect and interpret assessment data to help improve student learning?

Evidence of Impact: Detail efforts made to disseminate information regarding effective assessment tools and practices.

Objective 5.2: Promote the use of technology to support the design and implementation of next generation assessments.

Strategy 5.2.1: Design and implement pilot projects that support technology-based assessments, including simulations and game environments, innovative delivery platforms, and multiple ways for students to demonstrate understanding.

Evaluation Strategy: Are students assessed with a wider variety of instruments that result in an evaluation of competency and functional literacy instead of memorization of information?

Evidence of Impact: Document the processes of designing and implementing the pilot projects.

Evidence of Impact: Describe the number, types, locations, and scope/extent (breadth and depth) of the pilot projects.

Evidence of Impact: Describe how the results of pilots conducted by school divisions are shared.

Strategy 5.2.2: Provide best practices in the use of technology to support competency-based approaches.

Evaluation Strategy: Do educators use technology-based assessments to support competency-based education?

Evidence of Impact: Detail efforts made to disseminate information regarding competency-based approaches.

<http://www.doe.virginia.gov/support/technology/index.shtml>



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Draft Outline for the Educational Technology Plan for Virginia: 2017-2022

Learning: Developing the Life-Ready Graduate from K to 12 (to support how students learn)

GOAL: All learners will have deep and empowering learning experiences in both formal and informal settings that prepare them to be active, creative, knowledgeable, and ethical participants in our globally connected society, meeting the requirements of Virginia's Profile of a Graduate.

Deeper Learning Objective: Through Virginia Standards of Learning, students are provided not only a solid grounding in the Virginia content standards but also opportunities for deeper learning to include critical thinking, collaboration, communication, and creative thinking.

Strategy: Standards of Learning incorporate deeper learning skills

Strategy: Integration of Computer/Technology and Computer Science Standards, K to 12

Strategy: Learning resources to encourage 21st century skills addressing college and career readiness

Strategy: Student access Web-based content, tools, and collaborative spaces

Balanced Assessment Objective: All students are assessed using a variety of measures (such as portfolios, performance-based tasks, statewide assessments, diagnostic, etc.), enabled and enhanced with technology, for both formative and summative assessments so as to provide a comprehensive view of students and their learning.

Strategy: Share local alternative assessments

Strategy: Evaluate statewide assessments

Strategy: Competency-based assessments in all content courses, particularly CTE

Strategy: Best practices in Special Education Alternate Assessments

Extended Digital Environment Objective: The use of digital resources is woven seamlessly into the learning experiences for students, for whom learning transcends the barriers of time and place.

Strategy: Expand virtual and blended learning opportunities

Strategy: Virtual Virginia courses

Strategy: Student opportunities to pursue and fulfill industry certifications, professional licenses and dual enrollment courses

Strategy: Open Education Resources (OER) supported through participation in the national #GoOpen project

Digital Literacy Objective: Students are confident digital citizens, developing skills that transfer to local community citizenship.

Strategy: Integrate Internet safety and digital citizenship skills (as specified by the Code of Virginia)

Strategy: Student awareness of and skills for data safety

Strategy: Students communicate respectfully with a variety of people, value diversity

Teaching: Gaining Skills to Enhance Student Learning (to support teachers who are learning along with students)

GOAL: Educators' professional growth will be supported by technology that connects them to expertise, resources, and learning experiences that can empower them to provide, in turn, deep, personalized learning experiences for all students.

Skill Baseline Objective: The base level of technology skills for teachers and other educators (such as specialists and librarians) is consistent and robust.

Strategy: Update the Technology Standards for Instructional Personnel (TSIP) from 1998 version

Strategy: Teacher education programs include robust technology skills

Professional Learning Objective: Teachers and other educators pursue personalized professional learning opportunities with the goal to seamlessly integrate technology tools to support personalized, deeper learning for students.

Strategy: Teachers to pursue personalized learning paths

Strategy: Teachers use digital resources to effectively personalize student learning

Strategy: Information about new and emerging technologies, assistive technology

Strategy: Support for educators on how to use data to improve student learning

Leadership: Develop Framework for Effective Governance (to develop and empower effective leadership)

GOAL: Embed an understanding of technology-enabled education within the roles and responsibilities of education leaders, and enable leaders to be effective through fostering a quality leadership framework.

Technology-enabled Leaders Objective: Leverage work with other organizations, grants and initiatives to develop and implement professional development regarding the use various technologies to provide broader and more effective ways to communicate with peers and educational stakeholders, creating trust and respect among all parties.

Strategy: Professional growth opportunities for leaders provide insight into the use of technology for learning as well as for leading

Strategy: Partner with other organizations to provide opportunities for leaders to meet, collaborate, and share ideas, resources, effective practices

Strategy: Guidance on maintaining appropriate and frequent two-way communications (including parents and students) through social media and other technology tools

Strategy: Encourage leaders through VDOE requirements, policies and procedures to maintain at least a base level of educational technology skills (including knowledge of assistive technology) and to try innovative approaches to education

Collaborative Partnerships Objective: Develop, maintain, and leverage partnerships with various local and state organizations to provide a greater connection between the schools and the community.

Strategy: Pilot projects to evaluate new technologies, new approaches

Strategy: Encourage opportunities to share and develop initiatives, projects and programs; promote internships and mentorships

Planning/Policies/Procedures Objective: Provide guidance to divisions to develop sound plans, policies and procedures for the acquisition and management of technologies for both current and future needs.

Strategy: Statewide technology plan; Division technology plans

Strategy: Encourage evaluation and participation in federal and state programs

Strategy: Provide guidance regarding policies and procedures for long-term planning, acquiring and managing technology, including assistive technology

Strategy: Address needs of all stakeholders who are responsible for policies and procedures at the division level

Strategy: Assist school boards and administrators develop and evaluate policies to balance safety and security issues while allowing for instructional innovation, ensure Internet safety programs and data security plans comply with state and federal regulations while enabling students to pursue innovative ways of learning

Infrastructure: Networks, Software, Devices & People (to support equity of access and opportunity)

GOAL: All students and educators will have access to a secure, flexible and capable infrastructure when and where they need it for learning, and be supported by knowledgeable professionals.

Technology Infrastructure Objective: Provide the technical infrastructure necessary to support learning environments.

Strategy: By 2020, facilitate the continual expansion of broadband capability to support digital learning and innovative education by providing speeds of 4.3 Mbps per user (smaller divisions), 3 Gbps per 1,000 users (medium school divisions), and 2 Gbps per 1,000 users (larger school divisions)—based on accepted standard established by State Educational Technology Directors Association (SETDA)

Strategy: Divisions use various standards (such as SCORM) for the interoperability of systems and avoidance of proprietary systems

Strategy: Assistance to divisions interested in pursuing use of data from longitudinal data systems

Strategy: Work with communities to provide internet connectivity in and out of school buildings

Equity Objective: Provide resources and support to ensure that every student has access to a personal computing device that is appropriate for their needs.

Strategy: Tools that extend students' capabilities, can be customized to meet individual needs and preferences, and support learning

Strategy: Assistive Technology service and devices according to IDEA

Strategy: Evaluate the interactive and universal design features of technology and digital resources

Security Objective: Provide and support secure technical infrastructure that protects threats to data, equipment, all other technology resources, and people.

Strategy: Update plans, procedures, and technology to minimize threats

Strategy: Routinely test system to ensure continued resilience

Human Infrastructure Objective: Provide the human infrastructure necessary to support learning environments.

Strategy: Promote funding and support for Instructional Technology Resource Teachers (ITRTs)

Strategy: Promote funding and support for Technical Support Personnel as specified in the Standards of Quality

Strategy: Incorporate librarians and other specialists into all educational technology initiatives

Strategy: Update the 2008 Guidelines for ITRTs

Accountability: Tools and Skills (to define and then measure success)

GOAL: At all levels, our education system will leverage the power of technology to measure what matters and enable the use of data to improve learning and school operations, while protecting individual privacy.

Balance Objective: Appropriate data are made available to stakeholders while at the same time the data are protected from abuse.

Strategy: Leaders work with stakeholders to ensure data are appropriately accessible

Strategy: Protect data so that stakeholders can be confident that data (such as student data) are secure and that privacy is protected

Strategy: Division personnel knowledgeable about data privacy responsibilities and procedures, including the secure transfer and use of data

Data and Learning Objective: Divisions use technology tools to obtain a variety of data in order to provide usable information for students, teachers and parents to help throughout the teaching and learning process.

Strategy: Best practices in the use of technology to understand wide variety of data

Strategy: Support divisions on how to most effectively make decisions and take action based on data

Data Collection and Reporting Objective: Data are collected as needed, in a secure and effective manner, to assist both divisions and the VDOE to meet their goals, especially in the areas of monitoring and compliance.

Strategy: Ensure the collection of data is coordinated and managed, and that the use of such data is communicated to the stakeholders.

Strategy: Provide secure data to stakeholders in useful formats; accessible

Strategy: Use data to inform and adjust daily operations as well as policies, procedures and plans