USING ESSA TO FUND EDTECH

Getting the Most Out of Title IV-A

UPDATED APRIL 2020

*Asterisks indicate sections with updates from the 2019 version of this guide.

The Every Student Succeeds Act and Educational Technology

Title IV, Part A of the Every Student Succeeds Act (ESSA), referred to as Title IV-A, authorizes the Student Support and Academic Enrichment (SSAE) grant. The SSAE grant is a block grant that provides funds to support three broad categories of programs and activities: providing students with a well-rounded education, supporting safe and healthy schools and promoting the effective use of technology. Federal dollars appropriated towards Title IV-A have grown over the last several years — from $400 million in FY17, or less than one-fourth of the authorized amount, to $1.21 billion in FY20.[1] Because of the additional funds, states and districts can expect an increase in the number of programs and activities they can support.

HOW CAN TECHNOLOGY SUPPORT YOUR STATE/DISTRICT VISION FOR TITLE IV-A?

With such a wide range of allowable uses, states and districts must determine which programs and activities they will prioritize for supporting with Title IV-A funds. In this guide, ISTE encourages states and districts to strongly consider the integration of technology to support all allowable uses of Title IV-A funds, regardless of the particular category under which a program or activity falls. Please see pages 11 through 31 for specific examples. Note that products, services and other resources referenced in this guide are only meant to serve as examples and are not necessarily ISTE endorsements.

In 2018, the AASA, the School Superintendents Association, the National Association of Federal Program Administrators, Whiteboard Advisors and the Title IV-A Coalition conducted a national survey of 622 districts, asking leaders about their plans for allocating Title IV-A funds.[2] For each of the three funding categories, the survey identified several top district priorities (see figure to the right). This guide draws evidence from research and example cases across the country to demonstrate that technology can enrich and enhance all such uses of Title IV-A funds. State and district leaders can use this guide as a resource as they develop their plans to allocate Title IV-A funds.

2018 National Survey Results: Top District Priorities for Title IV-A

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1. Positive Behavior Interventions and Supports (p.26)
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3. Violence Prevention, Crisis Management and Conflict Resolution (p.28)

[1] U.S. Congress. (2019). *Division A: Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2020.* Retrieved from https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/HR%201865%20-%20Division%20A%20-%20LHHS%20SOM%20FY20.pdf

[2] Ng, N. E. & DeSchryver, D. (2018). *Bringing ESSA Title IVA to life: How school districts are investing Student Support & Academic Enrichment funding.* Alexandria, VA: AASA. Retrieved from https://aasa.org/uploadedFiles/Policy_and_Advocacy/files/AASA%20NAFEPA%20WBA%20ESSA%20Title%20IV%20Survey%20FINAL%20061818.pdf

2019 NATIONAL TITLE IV-A SURVEY

A 2019 follow up survey of over 1,000 districts largely mirrored 2018 results. Furthermore, approximately 90 percent of respondents reported that continued investment of Title IV-A funds in the effective use of technology was important to their district.[3]

A CALL TO EXPAND PERSONALIZED PROFESSIONAL LEARNING OPPORTUNITIES

According to the U.S. Department of Education's Non-Regulatory Guidance on Title IV-A (hereinafter referred to as the "ED Guidance"), districts cannot spend more than 15 percent of the funds used to support the effective use of technology for "devices, equipment, software applications, platforms, digital instructional resources, [or] other one-time IT purchases."[4] This limit was set by Congress to ensure that a majority of Title IV-A funds are spent on developing the capacity of educators and opening up new technology-enabled learning experiences for students, rather than paying for equipment. ISTE thus encourages states and districts to carefully evaluate the effectiveness of their existing technology before making new investments.

Furthermore, researchers continue to highlight the importance of building educators' capacities to integrate technology into instruction, especially for educators of disadvantaged student populations. The Stanford Center for Opportunity Policy in Education and the Alliance for Excellent Education find that a teacher's knowledge of how best to use the digital solutions available to them is a major variable affecting achievement gaps.[5] Surveys conducted by the Bill and Melinda Gates Foundation find that about half of educators identify "lack of training" as one of the biggest barriers to incorporating technology into their teaching.[6] A Pew Research Center study finds that 70 percent of educators in higher-income areas "say their school does a 'good job' providing … the resources and support they need to incorporate digital tools in the classroom," compared to just 50 percent of educators in lower-income areas.[7]

Therefore, ISTE recommends that states and districts invest a significant portion of their Title IV-A funds into personalized professional learning opportunities to empower educators in using technology to transform instruction. The 2019 national survey on Title IV-A shows that many districts are already moving in this direction, as 44 percent of respondents using Title IV-A funds for educational technology reported that they are supporting "teacher professional development/skill development/collaboration."[3]

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[3] Ng, N. E., Bernstein, A., & Yost, E. (2019). *Summary of the 2019 national ESSA Title IV-A survey*. Alexandria, VA: AASA. Retrieved from https://aasa.org/uploadedFiles/Policy_and_Advocacy/Resources/ESSATitleIVSummaryofFindings-070219.pdf

[4] Office of Elementary and Secondary Education. (2016). *Non-regulatory guidance: Student support and academic enrichment grants*. Washington, D.C.: U.S. Department of Education. Retrieved from https://www2.ed.gov/policy/elsec/leg/essa/essassaegrantguid10212016.pdf

[5] Darling-Hammond, L., Zielezinski, M. B., & Goldman, S. (2014). *Using technology to support at-risk students' learning*. Washington, D.C.: Alliance for Excellent Education. Retrieved from https://edpolicy.stanford.edu/sites/default/files/scope-pub-using-technology-report.pdf

[6] Pressey, B. (2013). *Comparative analysis of national teacher surveys*. New York, NY: Joan Ganz Cooney Center. Retrieved from https://files.eric.ed.gov/fulltext/ED555587.pdf

[7] Purcell, K., Heaps, A., Buchanan, J., & Friedrich, L. (2013). *How teachers are using technology at home and in their classrooms*. Washington, D.C.: Pew Research Center. Retrieved from https://www.pewresearch.org/internet/2013/02/28/how-teachers-are-using-technology-at-home-and-in-their-classrooms/

Centering Educational Technology in Title IV-A Funding Conversations

As in-house experts in educational technology, state education technology directors and district technology coordinators, as well as their respective teams at the state education agency (SEA) and local education agency (LEA), are uniquely positioned to drive critical conversations about Title IV-A funding decisions. ISTE recommends the following action steps for state education technology directors and district technology coordinators for using this guide to situate technology at the forefront of those decisions. Additional resources helpful to this process can be accessed in Appendix B, as well as the U.S. Department of Education's T4PA technical assistance center.

ACTION STEPS FOR STATE EDUCATION TECHNOLOGY DIRECTORS

Understand the Local Landscape

1. *Identify your state's Title IV-A coordinator(s).*
   Who is responsible for managing the state's Title IV-A funds? This information is usually available on your SEA website. This individual may share another role at the SEA. For example, Arizona's current Title IV-A officer is also the director of arts education. There also may be one or more individuals assigned to this role. Wisconsin has designated one point of contact for each of the three categories under Title IV-A, whereas Oklahoma has designated only a single point of contact.

2. *Identify your state's current Title IV-A priorities.*
   Current state priorities for Title IV-A can often be located in approved ESSA plans, previous Title IV-A requests for applications (RFAs) or previous consolidated applications for federal grants. For example, Kentucky explicitly expressed in its ESSA plan that the state will prioritize the expansion of school climate programs through Title IV-A funds. Nevada stated in a recent Title IV-A guidance document that the state's strategic priorities include college and career readiness, supporting educator effectiveness and family engagement, performance evaluation and stakeholder collaboration.

3. *Conduct additional landscape research as necessary.*
   What are some examples of effective technology integration in your own state? Who could you reach out at the LEA or Educational Service Agency (ESA) levels to find out? Do these examples align with your state's current Title IV-A priorities, and/or could they be expanded through Title IV-A funds? Ensure that your examples fall under the allowable uses of Title IV-A funds (page 6 of the ED Guidance). Other examples of technology integration, aligned to both research and ESSA provisions, can be found in this guide (pages 11 through 31). Having these examples in hand will help support your position as you interact with the state's Title IV-A coordinator(s) in subsequent steps.

Collaborate to Advocate for Technology

1. *Schedule a formal meeting with your state's Title IV-A coordinator(s).*
   Secure time to speak with your state's Title IV-A coordinator(s). In requesting a meeting, briefly mention the research and examples cited in this guide (pages 11 through 31). See Appendix A for an email template you can adapt according to your needs (page 34).

2. *At the meeting, make your case to the state's Title IV-A coordinator(s) about how technology can be used as a critical tool to support the state's current Title IV-A priorities. Be sure to connect the dots between technology and the specific program or activity you are advocating for.*
   During this discussion, you can greatly enhance your case by identifying the specific ESSA provision where the use you are advocating for is permitted and showing alignment to state priorities. Because ESSA calls on activities supported by Title IV-A funds to be evidence-based[4], you should also cite research and example cases that support this approach. Use relevant sections of the ISTE guide (pages 11 through 31) to collect this background information that supports your position. Mention any additional examples you have identified through your own landscape research.

3. *Form a state Title IV-A planning committee with your state's Title IV-A coordinator(s).*
   Invite diverse voices and perspectives into this committee. Members may include, but are not limited to, other Title IV-A stakeholders within the SEA (e.g. directors of STEM or social-emotional learning programs) and state education technology advocates like ISTE affiliates. The committee should create multiple opportunities for direct engagement with district-level stakeholders in order to examine their needs in depth. This work may require consulting district leaders (especially district technology coordinators) to identify their most critical technology needs. District leaders can also use this opportunity to share feedback about previous Title IV-A grant writing experiences so that future processes are as streamlined as possible.

4. *With your state's Title IV-A coordinator(s), present major "headlines" of the committee's findings to the state education chief.*
   The state education chief oversees the SEA by directing the implementation of policies and can be a powerful ally in this process. Identify and present two to three "headlines" of your committee's findings. What are two to three of the most important needs expressed by district-level stakeholders? How can technology help alleviate those challenges? Share your ideas for next steps (see "Lead the Process Together" below) and make sure that the state education chief is on board.

Lead the Process Together

1. *Taking into account inputs from the committee, district-level stakeholders and the state education chief, work with your state's Title IV-A coordinator(s) to design and refine state RFAs that emphasize the role of technology.*

   The revised RFA can be a powerful tool to encourage district leaders to use Title IV-A funds for technology integration purposes. For example, the new RFA can specify that district applications should note how the district will leverage technology to address their needs across the three categories of Title IV-A, especially around building educator capacity. The new RFA can also require districts to submit their latest technology plan and demonstrate how their planned uses of Title IV-A funds align with this plan. As appropriate, the new RFAs can be presented alongside additional state guidance or rubrics that describe how district applications will be evaluated.

2. *Develop or improve on a dedicated "one-stop-shop" website for Title IV-A.*

   Section 4104 of ESSA reserves 5 percent of each state's Title IV-A allotment toward state activities to support Title IV-A implementation. A portion of this 5 percent set-aside can be used to develop a new website or improve on an existing website that provides technical assistance to school districts applying for Title IV-A funds (see the Wisconsin Department of Public Instruction's website for an example). This website can include general information about the grant, clearly outline the state's current priorities, specify the Title IV-A coordinator(s) and list relevant resources (e.g. this ISTE guide, the ED guidance, state RFA, etc.). For districts receiving more than $30,000, ESSA requires LEAs to complete a needs assessment.[4] Therefore, the website can also endorse or recommend options for needs assessments with a strong education technology component (e.g. ISTE Lead and Transform Diagnostic Tool, Future Ready Digital Learning Readiness Report or Digital Promise Edtech Pilot Framework).

3. *Provide districts with other types of supports for Title IV-A.*

   Another way that the state can use the 5 percent Title IV-A set-aside is to fund other types of technical assistance opportunities, such as webinars or in-person training events, that aim to build district leaders' awareness about the allowable uses of Title IV-A funds, communicate the state's current priorities and provide information about the subgranting process. See Oklahoma's webinar series for an example. States can also directly invest the funds into efforts that scale best practices in the effective use of technology. See "State Impact Story: Wyoming Leverages Title IV-A Funds to Support Educator Capacity in Educational Technology" on page 30 to learn how Wyoming is using Title IV-A funds to support ISTE Certification.

ACTION STEPS FOR DISTRICT TECHNOLOGY COORDINATORS

Understand the Local Landscape

1. *Identify your district's federal grants coordinator(s).*
   Who in your LEA is responsible for overseeing federal grants and program compliance? This individual could report to the district's chief academic officer, chief finance officer or the superintendent. There may be one or more individuals responsible for this role. For example, at Olean City School District in New York, Title IV-A funds are managed by a federal and state aid programs coordinator.

2. *Identify your state's current priorities for Title IV-A.*
   Your state may have specific priorities for how to spend Title IV-A funds. Check whether they have previously communicated this information through the state's approved ESSA plans, previous Title IV-A RFAs or previous consolidated applications for federal grants. Nevada stated in a recent Title IV-A guidance document that the state's strategic priorities include college and career readiness, supporting educator effectiveness and family engagement, performance evaluation and stakeholder collaboration.

   For additional information regarding the state's current priorities, reach out directly to your state's coordinator who manages Title IV-A funds. Their contact information is usually available on your SEA's website. This individual may share another role at the SEA. For example, Arizona's current Title IV-A officer is also the director of arts education. There also may be one or more individuals assigned to this role. Wisconsin has designated one point of contact for each of the three categories under Title IV-A, whereas Oklahoma has designated only a single point of contact.

3. *Conduct additional landscape research as necessary.*
   What are the most critical technology needs of your district? What are some examples of effective technology integration in your district or another district in your state? Who are administrators, coaches or teachers leaders you could reach out to? Do these examples align with your state's current priorities, and/or could they be expanded through Title IV-A funds? Ensure that your examples fall under the allowable uses of Title IV-A funds (page 6 of the ED Guidance). Other examples of technology integration, aligned to both research and ESSA provisions, can be found in this guide (pages 11 through 31). Having these examples in hand will help support your position as you interact with the district's federal grants coordinator(s) in subsequent steps.

Collaborate to Advocate for Technology

1. *Schedule a formal meeting with your district's federal grants coordinator(s).*
   Secure time to speak with your district's federal grants coordinator(s). In requesting a meeting, briefly mention the research and examples cited in this guide (pages 11 through 31). See Appendix A for an email template you can adapt according to your needs (page 34).

2. *At the meeting, make your case to the district's federal grants coordinator(s) about how technology can be used as a critical tool to support both the district's needs and the state's current priorities for Title IV-A. Be sure to connect the dots between technology and the specific program or activity you are advocating for.*
   During this discussion, you can greatly enhance your case by identifying the specific ESSA provision where the use you are advocating for is permitted and showing alignment to state and district priorities. Because ESSA calls on activities supported by Title IV-A funds to be evidence-based[4], you should also cite research and example cases that support this approach. Use relevant sections of the ISTE guide (pages 11 through 31) to collect this background information that supports your position. Mention any additional examples you have identified through your own landscape research.

3. *Form a district Title IV-A planning committee with your district's federal grants coordinator(s).*
   Committee members should hold multiple opportunities to engage directly with district stakeholders to examine their needs in depth. This work may require consulting a diverse group of students, parents, administrators, teachers, community members and others as required by ESSA (page 11 of the ED Guidance) to discuss how technology can help alleviate current challenges.

4. *With your district's federal grants coordinator(s), present major "headlines" of the committee's findings to the district superintendent.*
   The district superintendent can be a powerful ally in advocating for the use of Title IV-A funds to promote effective instructional practices powered by technology. Identify and present two to three "headlines" of your committee's findings to the superintendent. What are two to three of the most important needs expressed by your stakeholders? How can technology help alleviate those challenges? Check with the district superintendent that your ideas for next steps (see "Lead the Process Together" below) are aligned to the LEA's overall vision and goals.

Lead the Process Together

1. *Work with your district's federal grants coordinator(s) to complete needs assessments and provide language for grant applications that will be submitted to the state.*
   For districts receiving more than $30,000, ESSA requires LEAs to complete a needs assessment.[4] Use needs assessments with a strong education technology component, such as the ISTE Lead and Transform Diagnostic Tool, Future Ready Digital Learning Readiness Report or Digital Promise Edtech Pilot Framework. The grant applications should also be explicit about how Title IV-A funds will be invested into technology that will support the district's needs as well as the state's current priorities for Title IV-A.

2. *Maintain an open line of communication with state leaders.*
   Communicate early and often with state education technology directors and state Title IV-A coordinators for additional guidance and resources on the Title IV-A subgranting process. The email template in Appendix A can be adapted for this purpose as well (page 34).

Recommendations for States and Districts

The remainder of this guide, divided into three sections — effective use of technology, well-rounded education and safe and healthy schools — explores how technology can support many of the allowable uses of Title IV-A funds. Each subsection includes: where in ESSA or the ED Guidance a specific use is permitted, research that supports technology integration and example cases of this approach in action at various organizations and school districts.

As stated in the “Centering Educational Technology in Title IV-A Funding Conversations” section, this resource can be used by state and district leaders to help situate technology at the forefront of Title IV-A funding decisions. State education technology directors and district technology coordinators, as well as their respective SEA/LEA teams, should start by identifying their state’s current Title IV-A priorities, locating the corresponding subsection(s) in pages 11 through 31 and gathering the relevant information that would help support their position when meeting with the state or district Title IV-A officer(s). Examples of effective technology integration from their own state or district, which could be expanded through Title IV-A funds, would also be a powerful advocacy tool.

Effective Use of Technology

RELEVANT ESSA PROVISIONS

ESSA Sec. 4104
"Each State that receives an allotment … shall use the funds available … for … supporting local educational agencies in providing programs and activities that … increase access to personalized, rigorous learning experiences supported by technology."

ESSA Sec. 4109
"[E]ach local educational agency, or consortium of such agencies, that receives an allocation … shall use a portion of such funds to improve the use of technology to improve the academic achievement, academic growth, and digital literacy of all students."

1. TEACHER PROFESSIONAL DEVELOPMENT AND COLLABORATION

Blended Professional Learning Opportunities
Technology enables innovative and personalized approaches to educator coaching and professional development. For example, Title IV-A funds can be used by states and districts to form partnerships with organizations that provide teachers with flexible opportunities to engage in blended professional learning opportunities.

Allowance under ESSA

The ED Guidance states that Title IV-A funds may be used to "provide opportunities for more focused, relevant, and continuous professional development."[4] The Office of Educational Technology's (OET) Dear Colleague Letter expands on the guidance by encouraging states and districts to invest ESSA funds into "improving and personalizing professional learning and other supports for educators."[8]

Evidence of Effectiveness

ISTE's literature review on blended professional learning finds that these programs can be effective if it meets certain key criteria.[9] For example, blended programs must:

- Build on existing networks and encourage educators to build new communities of practice.
- Provide ongoing, on-demand support to educators.
- Offer educators personalized learning pathways.
- Require educators to translate their learning into practice in their own contexts.
- Integrate reflection on processes and outcomes.
- Model instruction management and delivery strategies that leverage digital solutions.

Furthermore, the Institute for Education Sciences' literature review on online professional learning communities suggests that they can not only achieve the same goals as traditional, face-to-face communities, but also can expand access to experts and peer educators beyond geographic or time barriers, allow for ongoing dialogue and self-reflection, create a dimension of

[8] Office of Educational Technology. (2017). *Dear colleague letter: Federal funding for technology*. Washington, D.C.: U.S. Department of Education. Retrieved from https://tech.ed.gov/files/2017/01/2017.1.18-Tech-Federal-Funds-Final-V4.pdf
[9] ISTE. (2017). *Summary: Literature scan on learning and PD.* Arlington, VA: ISTE.

flexibility by aligning discussion topics with individual interests and provide consistent opportunities for novice teachers to receive mentoring.[10] OET's report on Future Ready Districts highlights that online learning communities, including those facilitated via social media, allow educators to "effectively access, share and create knowledge, as well as strengthen their commitment to the profession" and that the "cost of supporting them is modest compared with face-to-face equivalents."[11]

Example Case 1: ISTE's Professional Development Solutions Build Educator Capacity

ISTE provides several solutions for blended professional development. For example, ISTE Certification is a competency-based, device-neutral professional learning program based on the ISTE Standards for Educators. This three-part blended program offers educators an opportunity to reimagine the use of educational technology in meaningful and transformative ways. Participants first complete a two-day, face-to-face training from ISTE Certification Authorized Providers (CAPs) located nationwide. Participants then follow up by completing a 30-hour online course to build additional proficiency in technology-empowered pedagogy. Finally, participants assemble a portfolio over the course of six months to be reviewed by ISTE Certification Evaluators. Participants who complete the program will earn recognition as an ISTE-certified educator.[12]

ISTE is also showcasing models of effective professional development through ISTE U, a series of online courses developed through partnerships with leading educators and education organizations that qualify for graduate-level credit or continuing education units. ISTE U courses embrace a variety of innovative education technology topics for educators to integrate in their practice, including computational thinking and artificial intelligence. Participants progress through course content at their own pace with the guidance of a highly qualified instructor.[13]

ISTE members can engage with 20+ Professional Learning Networks (PLNs) — each of which focuses on a particular topic, including digital citizenship, mobile learning and STEM — to connect with other practitioners with common interests, receive mentoring and feedback from experts and access a library of helpful resources compiled by other ISTE members.[14]

Some districts have already dedicated Title IV-A funds for professional learning resources provided by ISTE. Metropolitan School District of Steuben County in Indiana used their FY17 Title IV-A funds to support their teachers' book studies on two ISTE publications: *Technology, Reading & Digital Literacy* and *Gamify Literacy*.[15]

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[10] Blitz, C. L. (2013). *Can online learning communities achieve the goals of traditional professional learning communities? What the literature says.* Washington, D.C.: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Mid-Atlantic. Retrieved from https://files.eric.ed.gov/fulltext/ED544210.pdf

[11] Office of Educational Technology. (2014). *The Future Ready district: Professional learning through online communities*. Washington, D.C.: U.S. Department of Education. Retrieved from https://tech.ed.gov/wp-content/uploads/2014/11/Section7-FutureReadyDistrictBrief-Final.pdf

[12] ISTE. (2020). *ISTE Certification*. Retrieved from https://www.iste.org/learn/iste-certification

[13] ISTE. (2020). *ISTE U*. Retrieved from https://www.iste.org/learn/iste-u

[14] ISTE. (2020). *Professional Learning Networks.* Retrieved from https://connect.iste.org/community/learningnetworks

[15] Nusbaum, C. (2017). *Title IV, A SY 2017-2018 application*. Retrieved from https://www.doe.in.gov/sites/default/files/grants/17-18-title-iv-application-msd-steuben-county-7615-2nd.pdf

Example Case 2: EdCamps Offer District-Wide Professional Learning Opportunities

EdCamps are teacher-driven, participatory professional learning events that occur worldwide. Without a previously-determined agenda or a central vendor presence, EdCamps allow for genuine dialogue between educators about topics they find relevant to improving their practice. In 2015, Wappingers Central School District (WCSD) in New York held a district-wide EdCamp involving more than 700 teachers and school administrators who discussed topics ranging from fostering growth mindsets to utilizing formative assessments. Wappingers leveraged several technology solutions to ensure that learning was not limited to the day-long event. Various applications and social media platforms, such as Google Docs and Twitter, allowed participants to engage in dialogue and share additional resources even after WCSD EdCamp.[16]

Incentive Systems for Educators' Professional Learning

Title IV-A funds can also be used to develop systems that recognize and reward educators for engaging in learning that advances their practice.

Allowance under ESSA

The OET Dear Colleague Letter recommends that ESSA funds be used to "develop performance systems that reward and acknowledge professional learning outcomes that are competency-based rather than time- or input-based."[8] Micro-credentialing is one performance-based reward system currently being explored by states and districts. The ED Guidance cites micro-credentials as an example of how Title IV-A funds may be used to "provide personalized professional development so that educators receive tailored, job-embedded support."[4]

Evidence of Effectiveness

Research points to the effectiveness of well-crafted incentive systems in improving educator practice. The American Institutes for Research[17] and the Friday Institute[18] suggest that educators find the use of micro-credentials enjoyable and transfer their new learning into teaching practices. For example, the Friday Institute introduced micro-credentials into their Learning Differences MOOC-Ed (Massive Open Online Courses for Educators). Enrolled teachers learned about several learning science principles such as executive functioning, working memory and student motivation. Post-session surveys revealed that 97 percent of participants wanted to pursue another micro-credential, and many mathematics teachers incorporated working memory supports (mnemonics, different practice methods, opportunities for self-assessment) into their instruction.

[16] Pidala, C. & Warden, J. (2018). *Organize an EdCamp for your district*. Retrieved from https://www.iste.org/explore/articleDetail?articleid=640

[17] DeMonte, J. (2017). *Micro-credentials for teachers: What three early adopter states have learned so far*. Washington, D.C.: American Institutes for Research. Retrieved from https://www.air.org/sites/default/files/downloads/report/Micro-Creditials-for-Teachers-September-2017.pdf

[18] Acree, L. (2016). *Seven lessons learned from implementing micro-credentials*. Raleigh, NC: Friday Institute for Educational Innovation at the NC State University College of Education. Retrieved from https://www.fi.ncsu.edu/wp-content/uploads/2016/02/microcredentials.pdf?utm_source=fi&utm_medium=filinks&utm_campaign=pr

Example Case 1: Utah and Wyoming Link State Endorsement to ISTE Certification

The Utah State Board of Education will permit their licensed educators to use the ISTE Certification to meet the state's educational technology endorsement requirements.[19] Similarly, the Wyoming Department of Education will qualify ISTE-certified educators for the state's instructional technology endorsement.[20]

Example Case 2: Kettle Moraine Offers Micro-Credentials for Professional Learning

In 2015, Kettle Moraine School District's board of education approved a partnership with Digital Promise to implement a district-wide micro-credentialing system and provide teachers with flexibility, recognition and compensation for professional development. Teachers at Kettle Moraine can submit a personalized professional development plan to a committee of district and school leaders. Once approved, they engage in the planned professional development activities on their own time and pace, while collecting artifacts of their learning, such as student work and peer evaluations. The committee reviews these artifacts, and if shown to provide adequate evidence of learning, teachers earn a digital badge on the Digital Promise platform and a permanent salary increase.[21] In 2018, approximately 80 percent of teachers at Kettle Moraine earned a micro-credential in topics ranging from strategies for close reading to fostering student resilience.[22]

2. SUPPORTING EDUCATORS TO USE BLENDED CLASSROOM STRATEGIES

Sustained, Job-Embedded Coaching

ESSA defines blended learning as "a formal education program that leverages both technology-based and face-to-face instructional approaches." Blended learning environments "include an element of online or digital learning, combined with supervised learning time and student-led learning."[23] States and districts can support blended learning initiatives with Title IV-A funds by providing educators with sustained, job-embedded coaching opportunities.

Allowance under ESSA

The ED Guidance specifies that Title IV-A funds "may be used for ongoing professional development on how to implement blended learning projects and to support planning activities."[4] The OET Dear Colleague Letter expands on this permitted use by encouraging states and districts to invest in "ongoing, job-embedded professional learning opportunities to improve educator practice."[8]

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[19] Utah Education Network. (2020). *Educational Technology Endorsement Program*. Retrieved from https://www.uen.org/development/etep/

[20] Wyoming Department of Education. (2019). *WDE offers support for teachers to lead digital age classrooms.* Retrieved from https://edu.wyoming.gov/blog/2019/11/06/wde-offers-support-for-teachers-to-lead-digital-age-classrooms-inbox/

[21] Digital Promise. (2016). *Transforming the classroom with micro-credentials.* Retrieved from https://digitalpromise.org/2016/03/16/transforming-the-classroom-with-micro-credentials/

[22] Sturgis, C. (2018). *Practicing what they preach: Micro-credentialing at Kettle-Moraine.* Retrieved from https://www.competencyworks.org/case-study/practicing-what-they-preach-micro-credentialing-at-kettle-moraine/

[23] The Every Student Succeeds Act, Publ. L. No. 114-95 (2015). Retrieved from https://www.congress.gov/bill/114th-congress/senate-bill/1177/text

Evidence of Effectiveness

Research points to the effectiveness of blended learning approaches in the classroom. For example, RAND found that incorporating blended learning into a high school algebra course resulted in higher student scores when compared to courses using traditional instructional methods.[24] Several district-level case studies, cited throughout the U.S. Department of Education's National Education Technology Plan (NETP), also corroborate this result.[25]

Example Case 1: Temple ISD Provides Ongoing Coaching for Blended Learning

After successfully implementing a high school 1:1 initiative and piloting a blended learning program for their STEM and humanities courses, leaders at Temple Independent School District — including Lisa Adams, the assistant superintendent of curriculum and instruction — sought to expand the program to other Temple schools through a partnership with Education Elements. Education Elements will advise the district staff in introducing blended learning strategies into classrooms. This coaching will be accomplished not through one-off events, but with sustained professional development opportunities, including several on-site visits, support calls, workshops and strategy sessions.[26]

Example Case 2: Wisconsin Funds Future Ready Librarians Training for 200 Specialists

The Wisconsin Department of Public Instruction is leveraging the Future Ready Librarians framework to reimagine school libraries as spaces where students utilize technology actively to deepen their information literacy, creative communication, digital citizenship and innovative design skills. In 2019, ISTE partnered with the state agency to provide 200 school librarians with an opportunity to receive training on the Future Ready Librarians framework through the ISTE U platform.[27]

Purchasing Digital Solutions

Blended learning can be supported by Title IV-A funds through the purchase of digital solutions that can adapt to different learning spaces (e.g. laptop computers, tablets, software). However, such purchases would be subject to ESSA's 15 percent limit on "devices, equipment, software applications, platforms, digital instructional resources, [or] other one-time IT purchases."

Allowance under ESSA

The ED Guidance specifies that Title IV-A funds "may be used to build technology capacity and infrastructure, which includes … purchasing devices, equipment and software to increase readiness."[4] The OET Dear Colleague Letter expands on this permitted use by stating that ESSA funds may be used "to purchase devices for students to access digital learning materials and collaborate with peers and educators."[8]

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[24] Pane, J. F., Griffin, B. A., McCaffrey, D. F., Karam, R., Daugherty, L., & Phillips, A. (2013). *Does an algebra course with tutoring software improve student learning?* Santa Monica, CA: RAND Corp. Retrieved from https://www.rand.org/pubs/research_briefs/RB9746.html

[25] Office of Educational Technology. (2017). *Reimagining the role of technology in education: 2017 National Education Technology Plan update.* Washington, D.C.: U.S. Department of Education. Retrieved from https://tech.ed.gov/files/2017/01/NETP17.pdf

[26] Williams, M. (2017). *Temple ISD approves curriculum purchases*. Temple, TX: Temple Daily Telegram. https://www.tdtnews.com/news/article_df35cfd2-65db-11e7-ac68-17408eae51b8.html

[27] Wisconsin Department of Public Instruction. (2019). *Exciting opportunity for school librarians.* Retrieved from https://dpi.wi.gov/wilibrariesforeveryone/exciting-opportunity-school-librarians

Relevant Research

States and districts must ensure that trusted organizations and practitioners have vetted the resource for its quality. A recent nationwide survey conducted by ISTE and the Jefferson Education Exchange found that educators, when searching for new education technology solutions, consult local schools and districts more often than publications from research or nonprofit organizations.[28] Jefferson Education Exchange also found that educators are not likely to use research resources provided by the U.S. Department of Education's Institute for Education Sciences.[29] Such findings point to the need for reliable platforms that educators can use to gather information about the efficacy of potential purchases. For example, ISTE recently launched Edtech Advisor, an online platform where ISTE members can rate and share their contextualized experiences with particular digital solutions.

Furthermore, see ISTE's "Better Edtech Buying for Educators" guide[30] for an in-depth discussion of key factors that must be considered prior to purchasing new tools or software, including:

- Is the learning that occurs through the new solution aligned with student learning goals and standards, including the ISTE Standards for Students?
- Is there sufficient evidence that the new solution will be effective in your specific context?
- How does the new solution collect, share and secure student learning data?
- Does the school or district have the right personnel, policies and procedures necessary to ensure sustainable implementation?
- Has the leadership partnered with classroom educators to evaluate the new solution and discuss supports that they may need for effective implementation?

Example Case 1: Fulton County Deploys 1:1 Pilot with Attention to Educator Capacity

Fulton County School District in Georgia, recognizing that the power of technology-enabled learning derives not from the devices themselves, but the knowledge that educators have for effectively using them, deliberately deployed its 1:1 pilot in two phases. In phase 1, or the "pre-deployment phase," the district formed a partnership with Kennesaw State University (KSU) to provide teachers with professional learning on personalized learning practices. Teachers also learned about digital citizenship through a partnership with Common Sense Media. In phase 2, or the "post-deployment phase," teachers began selecting and implementing the devices that they saw most applicable to their needs. Teachers were continuously supported during this transition period through a gradual release from the KSU program and enrollment in a job-embedded coaching program from Microsoft Innovative Educators.[31]

[28] ISTE. (2018). *Study finds even tech-savvy educators struggle to find reliable research on edtech*. Retrieved from https://www.prnewswire.com/news-releases/study-finds-even-tech-savvy-educators-struggle-to-find-reliable-research-on-edtech-300687008.html

[29] Jefferson Education Exchange. (2019). *Educator voices on education research.* Arlington, VA: Jefferson Education Exchange. Retrieved from https://drive.google.com/file/d/1AnLli4KeRD8fkFc-HULM45b4_mnt3viR/view

[30] ISTE. (2019). *Better edtech buying for educators: A practical guide.* Arlington, VA: ISTE. Retrieved from https://id.iste.org/resources/product?id=4464&format=Book&name=Better+Edtech+Buying+for+Educators

[31] Office of Educational Technology. (n.d.). *Bear Creek Middle School: Professional learning for effective 1:1 implementation.* Retrieved from https://tech.ed.gov/stories/bear-creek-middle-school/?back=%2Fstories%2Fstory_tag%2Fprofessional-learning%2F

Example Case 2: Clarksdale Reviews Efficacy Data Prior to Software Purchase

In 2013, Clarksdale Municipal School District in Mississippi invested its Race to the Top Grant into a connectivity initiative to provide all students with a device. The district then began leveraging this 1:1 student-to-device ratio by exploring options for applications. Diving deeper than just anecdotal reviews from teachers and students, Clarksdale partnered with Mathematica Policy Research to examine the quality of iRead, an elementary-level reading application, before fully adopting it across the district. Using tools provided by Mathematica's Ed Tech RCE Coach, Clarksdale piloted iRead by introducing the application to students in its summer and afterschool programs. After the district observed mixed results on student achievement, the Ed Tech RCE Coach enabled them to take a further look into the data. This deep dive led to the discovery that implementation details, such as student usage time, mattered significantly. Through this evaluation experience, Clarksdale opted to purchase iRead for K-2 classrooms in the 2017-2018 school year.[32]

Example Case 3: Richmond Draws Implementation Plans Prior to Student Kit Purchase

Educators at Richmond Public Schools in Virginia were interested in helping students build their computational thinking skills by introducing littleBits, a modular electronics kit, into the district's engineering classes. Prior to using federal funds for the purchase, they presented the district with sufficient evidence on how the kit would enhance student learning. This process included showcasing evidence of leadership buy-in, student outcomes and alignment to state standards and competencies, as well as putting together a comprehensive implementation and professional development plan.[30]

[32] Place, K. & Manley, M. (2017). *Clarksdale Municipal School District: How to make sense of mixed results?* Washington, D.C.: Mathematica Policy Research. Retrieved from https://edtechrce.org/static/pdf/CaseStudy_Clarksdale_081417.pdf

Well-Rounded Education

RELEVANT ESSA PROVISIONS

ESSA Sec. 4104
"Each State that receives an allotment under section 4103 shall use the funds available under subsection (a)(3) for … supporting local educational agencies in providing programs and activities that … offer well-rounded educational experiences to all students … including female students, minority students, English learners, children with disabilities, and low-income students who are often underrepresented in critical and enriching subjects."

ESSA Sec. 4107
"[E]ach local educational agency, or consortium of such agencies, that receives an allocation under section 4105(a) shall use a portion of such funds to develop and implement programs and activities that support access to a well-rounded education."

1. STEM EDUCATION

Professional Learning for STEM Educators
Equitable access to high-quality instruction is a growing issue in STEM education. Various organizations note that STEM courses offered in schools do not currently prepare students for future careers.[33] One way of tackling this issue is by providing STEM educators with more effective opportunities to engage in professional learning. Technology can greatly enhance these opportunities by allowing professional development providers to meet research-based recommendations.

Allowance under ESSA

The ED Guidance supports using Title IV-A funds to provide professional learning for STEM educators, stating, "An LEA may use funds for programming and activities to improve instruction … in STEM subjects."[4] The OET Dear Colleague Letter provides an example of how this professional learning may be conducted, writing, "States and districts may use Title IV, Part A funds to … facilitate collaboration between schools and practicing scientists or engineers."[8]

Evidence of Effectiveness

Researchers examined STEM professional development programs at the National Center for Engineering and Technology Education and found positive effects on improving instructional practices. By dissecting the components of this program, the researchers provide several recommendations to STEM professional development providers. First, the program should be sustained over a period of time, extending beyond one-off events or conferences. Second, the program should be community-based, providing educators with insights about the nature of group work. Third, the program should seek to provide participants with a design challenge.[34]

[33] Computer Science Education Week. (2018). *Blurbs and useful stats.* Retrieved from https://csedweek.org/resource_kit/blurbs
[34] Avery, Z. K. & Reeve, E. M. (2013). Developing effective STEM professional development programs. *Journal of Technology Education*, 25(1), 55-63. https://doi.org/10.21061/jte.v25i1.a.4

These recommendations are also in line with effective professional development strategies identified in ISTE's literature review.[9]

Example Case 1: Florida State Engages Educators with Active Professional Learning

Florida State University's FCR-STEMLearn initiative serves 2,500 secondary STEM teachers from 55 districts and 3 rural consortia. Teachers first participate in a two-week summer institute on "STEM content knowledge, pedagogy, formative assessment, and other teaching tools." The program then uses technology to provide ongoing, job-embedded supports to ensure that the professional learning positively impacts student achievement. For example, after the two-week summer institute, participants connect with their teams through webinars and discuss successes and challenges.[35] Participants can also access STEM resources found in the CPALMS virtual library. They may additionally design resources and submit them to the program to be featured in the CPALMS library.[36]

Example Case 2: Communication Technology Links Educators with STEM Experts

Communication technology solutions support programs like the Southeast Exchange, which connects Juneau School District educators with scientists at the University of Alaska and National Oceanic and Atmospheric Administration (NOAA).[37] New Mexico similarly plans to use Title IV-A funds to create state-wide STEM professional learning communities where educators can discuss research-based instructional practices.[38]

Example Case 3: Professional Learning Networks Develop Communities of Practice

ISTE members can join the STEM PLN where they have an opportunity to virtually connect with "science, technology, engineering and mathematics educators to discuss, explore, and share best practices, research, and experience in STEM teaching and learning, supported by authentically using technology." STEM PLN members can access a variety of online resources ranging from webinars on leading, research-based STEM products to discussions on computational thinking and project-based learning.[39]

Assistive Technologies to Support STEM Education

Another way to tackle the STEM equity issue is by directly investing in digital solutions that support STEM learning. This includes devices and software that makes STEM courses more accessible to different student populations.

Allowance under ESSA

The ED Guidance clarifies that the Title IV-A funds may be used to increase "access for groups of underrepresented students to high-quality courses."[4]

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[35] Razzouk, R. (n.d.). *FCR-STEMLearn for grades 6-12 math and science teachers.* Retrieved from https://lsi.fsu.edu/projects/current-projects/fcr-stemlearn-for-grades-6-12-math-and-science-teachers/
[36] Razzouk, R. (n.d.). *CPALMS.* Retrieved from https://lsi.fsu.edu/projects/current-projects/cpalms/
[37] Northeast Fisheries Science Center. (2018). *Teachers and scientists team up to show students real world applications for what they learn in school.* Retrieved from https://www.fisheries.noaa.gov/feature-story/teachers-and-scientists-team-show-students-real-world-applications-what- they-learn
[38] New Mexico Public Education Department. (2017). *New Mexico rising: New Mexico's plan for the Every Student Succeeds Act.* Retrieved from https://webnew.ped.state.nm.us/wp-content/uploads/2018/02/FINAL-APPROVED-NM-State-ESSA-Plan.pdf
[39] ISTE STEM. (n.d.). *About us*. Retrieved from https://sites.google.com/view/iste17stempln/about-us?authuser=0

Evidence of Effectiveness

Visually-impaired students provided with accessible science instruction (e.g. text-to-speech software downloaded onto a data collection device) observed increases in self-confidence and interest in enrolling in a STEM major.[40] A literature review about multisensory technologies in STEM education corroborates this result, finding overall positive effects on student learning and engagement.[41] Furthermore, Torey Trust, associate professor of learning technology at the University of Massachusetts Amherst, highlights that accessible educational experiences that leverage technology must build and sustain student-educator relationships, as well as exhibit key features based on Universal Design for Learning (UDL) principles,[42] including:

- Multiple ways that educators represent content
- Multiple ways that students can engage with content
- Multiple ways that students demonstrate their understanding of content

Example Case 1: Assistive Technologies Create Access to STEM Learning

Several federally funded projects are developing assistive technologies to specifically increase access to STEM education. The 2017 NETP cites several examples, including eTouch Sciences. This application provides a "haptic sensing controller device to provide [students with] real-time tactile, visual, and audio feedback."[25]

Example Case 2: Elementary School Students Lead Accessibility Projects

Hamilton Crossing Elementary School in Georgia leveraged Title IV-A funds to support a student-led STEM project. Members of the club used a 3D printer to build 18 different tactile symbols that would assist a vision- and hearing-impaired friend communicate simple words like "Go," "Help," and "Finished" with peers and adults at the school. Principal Lynn Robertson at Hamilton Crossing applauded the students for using the newfound opportunity in an innovative way to help others.[43]

2. SOCIAL AND EMOTIONAL LEARNING (SEL)

Digital Citizenship

SEL is defined as the "process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions and handle interpersonal situations constructively."[44] In other words, SEL involves students attaining certain skills, attitudes and behaviors that enable them to understand and express their thoughts and emotions in a healthy manner and constructively interact with peers and adults. With one out of three middle and high

[40] Isaacson, M. D., Michaels, M., Supalo, C., Roth, A. (2016). An examination of accessible hands-on science learning experiences: Self-confidence in one's capacity to function in the sciences, and motivation and interest in scientific studies and careers. *Journal of Science Education for Students with Disabilities*, 19(1), 68-75. Retrieved from https://scholarworks.rit.edu/jsesd/vol19/iss1/7

[41] Taljaard, J. (2016). A review of multi-sensory technologies in a Science, Technology, Engineering, Arts and Mathematics (STEAM) classroom. *Journal of Learning Design*, 9(2), 46-55. http://dx.doi.org/10.5204/jld.v9i2.274

[42] Snelling, J. (2020). *7 ways to make remote learning accessible to all students.* Retrieved from https://www.iste.org/explore/7-ways-make-remote-learning-accessible-all-students

[43] Parker, R. (2018). *HCES STEM club uses 3-D printer to help student learn to communicate*. Cartersville, GA: Daily Tribune News. Retrieved from http://www.daily-tribune.com/stories/hces-stem-club-uses-3-d-printer-to-help-student-learn-to-communicate,20392

[44] Durlak, J. A., Dymnicki, A. B., Taylor, R. D., Weissberg, R. P., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405-432. https://doi.org/10.1111/j.1467-8624.2010.01564.x

school students having experienced a form of cyberbullying[45], educators are beginning to realize that the application of SEL should no longer be limited to face-to-face interactions. Thus, digital citizenship, defined in the ISTE Standards for Students as "recogniz[ing] the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and … act[ing] and model[ing] in ways that are safe, legal and ethical,"[46] should be a critical component of any SEL curriculum. States and districts can use Title IV-A funds to invest in professional learning programs that help educators better understand and apply the principles of digital citizenship.

Allowance under ESSA

The ED Guidance states that Title IV-A funds may be used toward "activities in social emotional learning, including interventions that build resilience, self-control, empathy, persistence, and other social and behavioral skills."[4]

Evidence of Need

Researchers have noted that current digital citizenship conversations "focus on the responsibilities of citizenship and the issues of surveillance, safety, cyberbullying, and internet etiquette." While recognizing that online safety certainly is a major issue, researchers also encourage educators to think about digital citizenship in a much broader sense, including the development of political identity and use of digital solutions for democratic participation.[47] ISTE and other education organizations are working together to shift the national conversation around digital citizenship to reflect this broader, positive approach. The DigCitCommit Initiative redefines digital citizenship as being composed of five competencies: inclusive, informed, engaged, balanced and alert. [48]

However, educators indicate a lack of preparation to teach digital citizenship. For example, one study examining preservice teachers' exposure to digital citizenship principles "reported that either there are no topics or themes about digital citizenship [within their program] or they are insufficient and shallow."[49]

Example Case 1: Los Angeles Develops Educator Capacity around the ISTE Standards

The Los Angeles Unified School District (LAUSD) in California is a model for strategically implementing the ISTE Standards. Most of the Instructional Technology Initiative's professional development offerings, including a "21st Century Learning Foundations" course, which builds educators' awareness of all seven strands of the ISTE Standards for Students, are supported through Title IV-A funds. All professional development offerings are also intentionally placed along a change management model to guide educators from awareness-building to reinforcement of practice.

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[45] Hinduja, S. & Patchin, J. W. (2014). *Cyberbullying: Identification, prevention, and response*. Cyberbullying Research Center. Retrieved from https://cyberbullying.org/Cyberbullying-Identification-Prevention-Response.pdf

[46] ISTE. (2017). *ISTE Standards for Students.* Arlington, VA: ISTE. Retrieved from https://www.iste.org/standards/for-students

[47] Mitchell, L. (2016). Beyond digital citizenship. *Middle Grades Review*, *1*(3). Retrieved from https://scholarworks.uvm.edu/mgreview/vol1/iss3/3

[48] ISTE. (2020). *DigCitCommit.* Retrieved from https://digcitcommit.org/

[49] Karaduman, H. (2017). Social studies teacher candidates' opinions about digital citizenship and its place in social studies teacher training program: A comparison between the USA and Turkey. *The Turkish Online Journal of Educational Technology*, *16*(2), 93-106.

LAUSD further provides schools with various systemic supports for implementing digital citizenship principles. This effort includes the development of a responsible technology use policy, social media guidelines, as well as educator and parent engagement resources. LAUSD has also partnered with Common Sense Education to provide schools and educators with the opportunity to become certified in digital citizenship.[50, 51]

Example Case 2: Alisal Union Reinforces Educator Knowledge of Digital Citizenship

During the rollout of its 1:1 device initiative, Alisal Union School District in California observed a need to teach students about the principles of digital citizenship, including online safety and guidelines for positive and productive online discussions. Taking a proactive approach, the district built a "Digital Citizenship Academy" from digital citizenship resources provided by Common Sense Education. By reviewing the materials provided through the Academy, teachers have reported that "they now have a much better understanding of what digital citizenship is and of the different concepts under that umbrella." Teachers also have reported that they are learning how to incorporate digital citizenship themes into everyday lessons, as opposed to dedicating a portion of instructional time to the subject.[52]

Example Case 3: ISTE U Course Extends Digital Citizenship beyond Online Safety

ISTE offers an online digital citizenship course through its ISTE U platform to help educators "teach digital citizenship lessons, integrate these topics into various content areas and make informed decisions regarding the education of students in the digital age." The course extends digital citizenship beyond online safety, helping educators convey to students that technology is capable of creating social good.[53]

Game-Based SEL Interventions

States and districts can use Title IV-A funds to invest in game-based SEL interventions. The World Economic Forum (WEF) and Boston Consulting Group (BCG) provide a rationale for incorporating technology into SEL programs, stating that this enhancement "can personalize learning, engage the disengaged, complement what happens in the classroom, extend education outside the classroom and provide access to learning to students who otherwise might not have sufficient educational opportunities."[54]

Allowance under ESSA

The ED Guidance states that Title IV-A funds may be used toward "activities in social emotional learning, including interventions that build resilience, self-control, empathy, persistence, and other social and behavioral skills."[4]

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[50] Los Angeles Unified School District. (2020). *Digital citizenship*. Retrieved from https://achieve.lausd.net/Page/13503
[51] S. Mendoza, personal communication, March 20, 2020.
[52] Cogswell, B. & Lopez, G. (2018). *Develop teacher leaders with digital citizenship academics*. Retrieved from https://www.commonsense.org/education/blog/develop-teacher-leaders-with-digital-citizenship-academies
[53] ISTE. (2018). *Digital citizenship in action: Online course syllabus.* Retrieved from https://www.iste.org/docs/isteu-docs/abbreviated-digital-citizenship-course-syllabus.pdf
[54] World Economic Forum & Boston Consulting Group. (2016). *New vision for education: Fostering social and emotional learning through technology*. Cologny, Switzerland: World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_New_Vision_for_Education.pdf

Evidence of Effectiveness

The WEF and BCG's literature review identifies three main types of game-based interventions with a "strong potential to help develop social and emotional skills." These include role-playing games, which provide students with interactive simulation activities, strategy games, where students must make coordinated, deliberate decisions to meet goals and sandbox games that allow for open-ended exploration, creation and collaboration.[53] Other researchers state that game-based interventions enable students to practice skills in a safe, controlled environment.[55] Lastly, peer-reviewed publications from the 3C Institute indicate that game-based interventions lead to decreases in behavior referrals and in-school suspensions.[56]

Example Case 1: Virtual Environments Build Digital Citizenship Skills

The 2017 NETP states that "digital games can allow students to try out varied responses and roles and gauge the outcomes without fear of negative consequences." The NETP cites many examples of existing game-based SEL interventions. For example, software like Ripple Effect and the Social Express "use virtual environments, storytelling, and interactive experiences to assess a student's social skill competencies and provide opportunities to practice."[25]

3. COLLEGE AND CAREER COUNSELING

Increasing Access to College and Career Counseling

In the United States, access to college and career counseling for students is limited. The American School Counselor Association (ASCA) and National Association for College Admissions Counseling (NACAC) recommend a student-to-counselor ratio lower than 250:1. Discouragingly, ASCA and NACAC find a national 482:1 ratio.[57] Currently, only New Hampshire, Vermont and Wyoming maintain a ratio lower than this recommended number. Furthermore, over one in five high schools (850,000 students) do not have access to any counselors.[58] Title IV-A funds can be invested into technology that increases student access to college and career counseling beyond geographic or time barriers.

Allowance under ESSA

The ED Guidance specifies that Title IV-A funds may be used "for college and career counseling programs and services … [that] help students make informed and better educational and career choices as they develop personal, social, educational, and career skills."[4]

Evidence of Effectiveness

Research has repeatedly demonstrated the effectiveness of using communication technology to increase student achievement through family engagement.[59] Researchers also suggest that

[55] Granic, I., Lobel, A., & Engels, R. C. M. E. (2014). The benefits of playing video games. *American Psychologist, 69*(1), 66-78. http://dx.doi.org/10.1037/a0034857
[56] 3C Institute. (n.d.). *Articles.* Retrieved from https://www.3cisd.com/article-publications
[57] American School Counselor Association & National Association for College Admissions Counseling. (n.d.). *State by state student-to-counselor ratio report: 10-year trends.* Arlington, VA: NACAC. Retrieved from https://www.schoolcounselor.org/asca/media/asca/Publications/ratioreport.pdf
[58] The Education Trust. (2018). *Equality isn't equity: Every student needs a great school counselor.* Arlington, VA: NACAC. Retrieved from https://edtrust.org/wp-content/uploads/2014/09/Equality-Isnt-Equity-Every-Student-Needs-a-Great-School-Counselor.pdf
[59] Kraft, M. A., & Rogers, T. (2015). The underutilized potential of teacher-to-parent communication: Evidence from a field experiment. *Economics of Education Review*, 47, 49-63. https://doi.org/10.1016/j.econedurev.2015.04.001

districts and states can leverage communication technology to provide families with accessible college and career counseling. For example, in one study, text message interventions were used to remind parents, guardians and students of various college admission tasks (e.g. submitting FAFSA documents). This Intervention showed "positive impacts on whether college-intending high school graduates from urban school districts enrolled in college, with effects concentrated among students with little access to college planning supports and students with less-developed college plans."[60]

Example Case 1: Remote Advising Helps Equitable Access to Postsecondary Education

The College Advising Corps helps high school students from disadvantaged populations enroll in higher education programs by pairing them with trained advisers, who have graduated from partner institutions and can guide students through the admissions, financial aid and enrollment processes. The virtual model for this program leverages technology to connect students to advisers remotely.[61] Researchers from Stanford University have found that the program has helped more students take actions necessary to apply for college (e.g. taking the SAT or ACT, submitting FAFSA) and become accepted.[62]

Example Case 2: Local Nonprofits Connect Students to College Advising Resources

Students Rising Above (SRA), a nonprofit organization serving 14,000 students from low-income families in the San Francisco Bay area, provides a virtual hub for students and partner schools. Through the hub, students have online access to advisers who, among other services, answer general questions, review personal statements, help build resumes and provide high school to college transition support. Educators at partner schools are also provided with college and career resources that they can refer students to.[63]

[60] Castleman, B. L. & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior and Organization*, 155, 144-160. https://doi.org/10.1016/j.jebo.2014.12.008

[61] College Advising Corps. (2020). *What we do.* Retrieved from https://advisingcorps.org/our-work/what-we-do/

[62] College Advising Corps. (2020). *Impact summary.* Retrieved from https://advisingcorps.org/our-impact/impact-summary/

[63] Students Rising Above. (2018). *About the hub.* Retrieved from https://studentsrisingabove.force.com/students/s/about-the-hub

Safe and Healthy Schools

RELEVANT ESSA PROVISIONS

ESSA Sec. 4104

"Each State that receives an allotment under section 4103 shall use the funds available under subsection (a)(3) for … supporting local educational agencies in providing programs and activities that … foster safe, healthy, supportive, and drug-free environments that support student academic achievement."

ESSA Sec. 4108

"[E]ach local educational agency, or consortium of such agencies, that receives an allocation under section 4105(a) shall use a portion of such funds to develop, implement, and evaluate comprehensive programs and activities that … foster safe, healthy, supportive, and drug-free environments that support student academic achievement."

1. POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS (PBIS)

Implementing Technology-Enhanced PBIS

The U.S. Department of Education's National Technical Assistance Center on PBIS clarifies that PBIS is not a specific program or intervention used to promote a safe and supportive learning environment. Rather, it is a "framework for maximizing the selection and use of evidence-based prevention and intervention practices along a multi-tiered continuum that supports the academic, social, emotional, and behavioral supports of all students."[64] Karen Giffords, director of the Behavior Education Technology Conference, states that technology can support PBIS implementation by providing "streamlined professional development."[65] Technology can increase the depth of information teachers receive about PBIS, as well as the flexibility with which they access the information.

Allowance under ESSA

The ED Guidance specifies that the Title IV-A funds may be used "to implement school-wide positive behavioral interventions and supports (PBIS)."[4]

Evidence of Effectiveness

The National Technical Assistance Center on PBIS provides a research-based blueprint to guide the development of PBIS-related professional learning opportunities. The document acknowledges the critical role of technology in "selecting, delivering, and enhancing [PBIS] professional development content and support."[66]

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[64] National Technical Assistance Center on PBIS. (2018). *PBIS FAQs.* Retrieved from https://www.pbis.org/pbis/getting-started
[65] Gifford, K. (2015). 3 ways technology can support positive behavior in schools. *eSchoolNews.* Retrieved from https://www.eschoolnews.com/2015/04/10/technology-behavior-054/
[66] Lewis, T. J., Barrett, S., Sugai, G., Horner, R.H., Mitchell, B. S. & Starkey, D. (2016). *Training and professional development blueprint for positive behavior interventions and supports.* National Technical Assistance Center on PBIS. Washington, D.C.: National Technical Assistance Center on PBIS. Retrieved from https://assets-global.website-files.com/5d3725188825e071f1670246/5d82bc8028a6017b536ec4f1_pbis_pd_blueprint_v3.pdf

Example Case 1: Digital Tools Support Wentzville's PBIS Implementation

Wentzville R-IV School District in Missouri placed technology at the forefront of its district-wide PBIS initiative. Doug Holler, principal of Lakeview Elementary School, states that "technology can enhance PBIS school-wide systems and practices" because it allows his school staff to "maintain fidelity and consistency of PBIS schoolwide practices." Specifically, technology allows Lakeview teachers to efficiently access and organize PBIS-related instructional materials. For example, Lakeview teachers use a virtual platform to access and organize resources such as "[student] data, [PBIS] training information, schedules/calendars, lessons, [and] videos." The school also uses Google Classroom to "manage, organize, store and share common school-wide lessons." Holler explains that technology can additionally serve to recognize students for displaying model behaviors. At Lakeview, teachers submit student nominations onto a shared Google Doc. Subsequently, administrators make calls to parents informing them of the teacher's positive comments.[67]

2. SAFE AND SUPPORTIVE LEARNING ENVIRONMENTS

Deepening Student Engagement with Relevant Content

A 2016 study conducted by the Bureau of Justice Statistics and the National Center on Education Statistics points to the need to create safe and supportive learning environments for students. About 3.3 percent of students ages 12-18 have been victims of non-fatal crimes at school, while 22 percent of all students have been on the receiving end of some form of bullying. Furthermore, 22 percent of high schoolers have encountered illegal substances at school, while 1.4 percent of schools report student sexual harassment of other students at least once a week.[68] Many schools take a reactionary approach to such behavioral issues, including suspensions and expulsions, which disproportionately affect students of color.[69] Technology, on the other hand, can support alternative, proactive and preventive solutions. Research suggests that deepening student engagement with relevant content through technology can help create healthy classrooms by not only preventing dropouts, but also decreasing delinquent behaviors.

Allowance under ESSA

The ED Guidance specifies that Title IV-A funds may be used to promote "supportive school climates to reduce the use of exclusionary discipline and promoting supportive school discipline."[4]

Evidence of Effectiveness

A study of approximately 1,300 students in an economically diverse school district used student-reported surveys to examine the relationship between engagement and delinquent behaviors (substance use, violence, vandalism, encounters with law enforcement, etc.). Researchers found a negative relationship between engagement and delinquent behaviors, stating, "[A]dolescents who had declines in behavioral and emotional engagement with school

[67] Holler, D. (n.d.) *Using technology to enhance PBIS systems and practices*. Retrieved from http://pbismissouri.org/wp-content/uploads/2017/06/STI2017_5J_Schoolwide-Expectation-Teaching-Through-Videos.pdf?x30198
[68] Zhang, A., Musu-Gillette, L., & Oudekerk, B. (2016). *Indicators of school climate and safety*. Washington, D.C.: National Center on Education Statistics, U.S. Department of Education. Retrieved from https://nces.ed.gov/pubs2017/2017064.pdf
[69] Loveless, T. (2017). *2017 Brown Center report on American education: Race and school suspensions*. Washington, D.C.: The Brookings Institution. Retrieved from https://www.brookings.edu/wp-content/uploads/2017/03/2017-brown-center-report-on-american-education.pdf

tended to engage in increased delinquency and substance use over time."[70] The Johns Hopkins Urban Health Institute corroborates this finding, stating that students feel safe and supported at school when they experience a "triad of engagement," comprised of a sense of connectedness with school staff and peers, a physically and emotionally safe environment and flexible, relevant instruction.[71]

Example Case 1: Educators Engage San Bernardino Students with Local Issues

Using the ISTE Standards for Students as the foundation for their classroom practices, educators at San Bernardino City are leveraging technology to not only engage students with a local issue, but also provide instruction on how to interact with peers in virtual spaces in a safe and supportive manner. For example, as students from across grade levels collaboratively use cloud-based platforms to create artifacts of their research on a local reservoir, they are provided with guidelines on how to give constructive criticism through a peer review process. Teacher Laura Gallardo says that these guidelines "give students an equation, essentially, on how to speak positively. Instead of just hitting the 'like,' they actually get to express themselves."[72]

Example Case 2: Arizona Students' Active Learning Leads to Less Disciplinary Issues

Under the ConnectED Initiative that aimed to provide broadband connectivity to underserved classrooms, Apple committed $100 million in philanthropic efforts.[73] In 2016, Apple's ConnectED grant was awarded to Pendergast Elementary School District in Arizona to purchase tablets for students. Principal Michael Woolsey and teachers at Pendergast Elementary school seized this newfound opportunity to increase student engagement with content. In a science lesson about different bridge structures, students worked with presentation applications like Keynote and iMovie to reinforce their creativity. They also used virtual reality applications to "visit" remote locations that appeared in classroom discussions. Michelle Longmire, technology teacher at Pendergast, further supported this work by coordinating professional development sessions where teachers learned to be more comfortable with using the tablets. Longmire noted that she observed increased student pride and confidence as they used the tools to develop new, healthy ways to express themselves. As a result, Pendergast Elementary School observed the number of office referrals cut in half.[74]

3. VIOLENCE PREVENTION, CRISIS MANAGEMENT AND CONFLICT RESOLUTION

Data-Driven Counseling Practices

National practitioner organizations support the use of data-driven counseling for school faculty involved in violence prevention, crisis management and conflict resolution programs. For example, the National Association of School Psychologists (NASP) encourages the formation of a "school leadership team" with a "professional skilled in data collection and analysis" in its

[70] Wang, M.-T., & Fredricks, J. (2014). The reciprocal links between school engagement, youth problem behaviors, and school dropout during adolescence. *Child Development*, *85*(2), 722–737. http://doi.org/10.1111/cdev.12138
[71] Blum, L. M. (n.d.). *Best practices for effective schools*. Baltimore, MD: Johns Hopkins Urban Health Institute.
[72] ISTE. [ISTE]. (2020). *Digital citizen 2B: Online behavior (ISTE Standards for Students)*. [Video file]. Retrieved from https://www.youtube.com/watch?v=0GCJC_pcBts
[73] Obama White House. (2013). *ConnectED Initiative*. Retrieved from https://obamawhitehouse.archives.gov/issues/education/k-12/connected
[74] Negrete, L. (2017). Technology in the classroom increases creativity and decreases discipline issues. *Arizona Education News*. Retrieved from https://azednews.com/technology-classroom-increases-creativity-decreases-discipline-issues/

guidelines for school violence prevention.[75] ASCA also rates school counseling programs as "RAMP" (Recognized ASCA Model Program) if they are "committed to delivering a comprehensive, data-driven school counseling program." Both organizations offer workshops around best practices for data-driven counseling.[76]

Allowance under ESSA

The ED Guidance specifies that Title IV-A funds may be used to develop "relationship building skills to help improve safety through the recognition and prevention of coercion, violence, or abuse."[4] The OET Dear Colleague Letter also supports the use of ESSA funds for professional development intended to improve data practices.[8]

Evidence of Effectiveness

In RAMP schools, over 80 percent of counselors report consistently sharing student data between school staff (administrators, teachers, other counselors) and using student data collaboratively to inform program decisions.[77] Researchers examined whether such data-driven counseling practices translate to increased student learning. In a study comparing student achievement in RAMP schools against their matching counterparts, researchers found that RAMP elementary schools had students who scored significantly higher in math and ELA end-of-year standardized assessments.[78]

Example Case 1: Digital Tools Allow for Efficient Information Sharing among Counselors

Several districts have invested in digital solutions that support data-driven counseling. For example, Wake County Public School System counselors in North Carolina use cloud-based platforms, including G Suite for Educators, to collect data on the go while conducting classroom visits. Blogging and website-building platforms have also enabled them to share helpful resources and practices with other school counselors.[79]

Example Case 2: Data-Driven Practices Inform Counseling Decisions

Montgomery County Public Schools' Social and Emotional Support Staff in Maryland built a website that would serve as a common, virtual hub to collect data regarding program indicators (risky behaviors, hospitalizations, suspensions, law enforcement involvement, etc.), school environment (school type, student age) and services provided at different schools (group

[75] National Association of School Psychologists. (n.d.). *School violence prevention: Guidelines for administration and crisis teams.* Retrieved from https://bit.ly/2UhbTFe

[76] American School Counselor Association. (2020). *Recognized ASCA model program.* Retrieved from https://www.schoolcounselor.org/school-counselors/recognized-asca-model-program-(ramp)

[77] Young, A. & Kaffenberger, C. (2011). The beliefs and practices of school counselors who use data to implement comprehensive school counseling programs. *Professional School Counseling.* https://doi.org/10.1177/2156759X1101500204

[78] Wilkerson, K., Perusse, R., & Hughes, A. (2013). Comprehensive school counseling programs and student achievement outcomes: A comparative analysis of RAMP versus non-RAMP Schools. *Professional School Counseling.* https://doi.org/10.1177/2156759X1701600302

[79] Pierce, M. (2012). For school counselors, technology enhances the human touch. *Technological Horizons in Education.* Retrieved from https://thejournal.com/Articles/2012/06/07/For-School-Counselors-Technology-Enhances-the-Human-Touch.aspx?Page=2

counseling, mental health referrals, crisis interventions, etc.). This virtual hub is used to create dynamic data visualizations that inform decisions.[80]

State Impact Story: Wyoming Leverages Title IV-A Funds to Support Educator Capacity in Educational Technology

State leaders, including Wyoming's State Superintendent of Public Instruction Jillian Balow, are learning that access to technology alone does not guarantee improved pedagogy. Access must be matched by efforts to build educators' capacities to provide meaningful learning experiences for all students. Wyoming strategically invested in educator development by leveraging a research-based framework on effective technology use. Below, Balow shares how Wyoming led this process and her advice for other leaders.

How did Wyoming recognize the need to build educator capacity around effective edtech use?

In 2016, Gov. Matt Mead launched the Wyoming Classroom Connectivity Initiative to establish the infrastructure necessary for digital learning. This interagency effort provided supports for districts using E-Rate and exponentially increased the number of connected classrooms. We observed a "we can do it" mentality permeate throughout the state, as local leaders saw neighbors making strides. But what kept me up at night was that, despite our progress, there remained educators who only considered technology as useful for administrative tasks like grading.

Educator capacity has implications for equity. When properly trained, educators can empower students through technology to have agency in their learning. To better understand how to manifest this vision, we surveyed hundreds of district and school staff about their needs. We learned that stakeholders agreed on the importance of digital learning opportunities for student success and the benefits of professional development on integrating technology into instruction. This information was used to develop a state-wide digital learning plan, which outlines how the state will systematically help educators use technology effectively.

Which policies and partnerships have been instrumental in helping build educator capacity?

I'm fortunate to work with colleagues who recognize the urgency of this issue. Together, we directly integrated the ISTE Standards into state content standards to show educators how technology can enhance learning in various subjects. We also adapted the ISTE Standards into our own digital learning guidelines, which map specific student skills and make recommendations for leveraging the ISTE Standards across grade bands.

Another incredible resource was ISTE's 2019 roundtable for state chiefs, where I learned how other leaders were navigating the educator capacity issue. One strategy that stood out was ISTE Certification, designed specifically to support mastery of the ISTE Standards. With ISTE's help, we worked to implement this rigorous program in Wyoming. We located a regional provider

[80] Shields, J. (2018). Using technology to lead a large-scale data project. *Communiqué*, *46*(5), 25-26. Retrieved from https://www.nasponline.org/publications/periodicals/communique/issues/volume-46-issue-5/using-technology-to-lead-a-large-scale-data-project

through an RFP [request for proposal] process and leveraged ESSA [Every Student Succeeds Act] Titles II-A and IV-A funds to enroll 100 educators. Our Professional Teaching Standards Board voted to qualify ISTE-certified educators for the state's instructional technology endorsement. For the first time, Wyoming educators are permitted to earn a new endorsement without going through a postsecondary program.

How will the state sustain the development of educator capacity?

The value of ISTE Certification for Wyoming educators is that it provides a pathway for sustainability. The program is focused on improving pedagogy, rather than using a specific tool. Therefore, the practices learned can be applied in different contexts. ISTE-certified educators can also propagate effective technology use throughout their school communities, which is especially helpful for educators whose preparation programs did not train them on technology-enhanced pedagogy.

What advice do you have for other states engaging in this work?

The good news is, you don't have to be a technology pro to begin this work and you don't need to do it alone. State leaders must make this work a priority by developing a strategic plan in collaboration with experts within their agencies, external partners and stakeholders. Engaging these different groups will help you strategize and implement an impactful educator development model that effectively meets the needs of those directly supporting students every day.

Conclusion: Why Does Title IV-A Matter?

The Student Support and Academic Enrichment grant, authorized under Title IV-A of ESSA, is a flexible source of federal education funding that can support a wide range of critical activities and programs. Research and example cases from around the country suggest that the appropriate use of technology, sustained through high-quality professional learning and coaching, can enhance many of those activities and programs. Thus, ISTE strongly urges state and district leaders to think of technology as working collaboratively with the other categories (i.e. well-rounded education and safe and healthy schools), not competitively against them.

Sufficient, equitable education funding has significant effects on student learning. The Learning Policy Institute states that "the estimated effect of a 21.7 percent increase in per-pupil spending throughout all 12 school-age years for low-income children is large enough to eliminate the education attainment gap between children from low-income and non-poor families."[81] Federal funds provided through Title IV-A funds can be used to supplement where state and local dollars fall short to support student learning. For any of the programs and activities mentioned throughout this guide to be executed to their fullest extent, federal funding must be sustained. The Title IV-A Coalition is a group of 30+ national organizations, including ISTE, advocating for maximum funding of Title IV-A (authorized at $1.6 billion moving forward). Please visit the coalition website for additional information and additional resources regarding Title IV-A.

Furthermore, to ensure that Congress continues to fund Title IV-A, advocates must have access to information about how federal dollars have substantively contributed to improving educator quality and student learning experiences. These stories may also help spark ideas among neighboring states and districts. Let ISTE know how your state or district is using Title IV-A funds to support edtech by contacting advocacy@iste.org.

[81] Baker, B. (2018). *How money matters for schools.* Washington, D.C.: Learning Policy Institute. Retrieved from https://learningpolicyinstitute.org/sites/default/files/product-files/How_Money_Matters_REPORT.pdf

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Appendix A: Sample Email to Your State or District's Title IV-A Officer(s)

Use the sample email below as an adaptable template to initiate a conversation with your state or district's Title IV-A officer(s) and express your interest in being involved in conversations around Title IV-A funds. ISTE encourages you to keep this initial message as brief as possible and dive more into the details of this guide during a face-to-face meeting. The sample email describes a hypothetical situation where a district technology coordinator calls for an initial meeting with their local educational agency's federal programs coordinator to discuss how technology may support the district's social and emotional learning (SEL) initiative (page 21).

Subject: Leveraging Federal Funding to Support [District Name]'s SEL Initiative

[Name of district federal programs coordinator],

Hello. My name is [name] and I'm [district]'s technology coordinator. I train and assist our teachers as new digital solutions are introduced into classrooms and invite education technology experts to our professional development sessions.

I'm reaching out because I wanted to discuss an important federal grant opportunity for our district. Specifically, I wanted to discuss expanding our district's SEL initiative with ESSA Title IV-A funds by providing a new professional development opportunity to a pilot cohort of teachers, who will learn how to apply the principles of digital citizenship to create a more robust, safe and healthy school climate. For our students to thrive in a time where technology connects people across the world, it will be critical for them to know how to transfer their SEL skills to a virtual setting. In order to help them do so, we need to equip our teachers with the knowledge of how exactly to incorporate digital citizenship principles into existing curricula.

The U.S. Department of Education permits this use for the Title IV-A funds, writing that Title IV-A funds may be used for "activities in social emotional learning, including interventions that build resilience, self-control, empathy, persistence, and other social and behavioral skills."

Several organizations are already providing this type of professional development opportunity, including Common Sense Education and ISTE. Furthermore, you can see linked here how Los Angeles Unified School District is comprehensively supporting digital citizenship.

I would like to discuss this idea in more depth with you. Is there a time in the next week when this meeting may be possible? Thank you and I hope to hear from you soon.

Regards,
[Name]

Appendix B: Additional ISTE Resources

Below are resources from ISTE's advocacy toolkit that may also be helpful in putting educational technology at the forefront of state and district Title IV-A funding decisions.

EDTECH POLICY OVERVIEW

Improving Student Outcomes through K-12 Edtech Policy provides three specific policy recommendations — setting a vision, building educator capacity and allocating funds — through which state leaders can promote transformative uses of edtech that prioritizes teaching and learning over tools and devices. This one-pager resource also includes short blurbs about how other states have already begun leveraging these policies.

SETTING A VISION FOR EFFECTIVE EDTECH USE

The ISTE Standards for Students, Educators, Education Leaders and Coaches all provide an evidence-based pedagogical framework for how technology can be used as a tool to advance students' learning in a variety of content areas. Eighteen states have formally adopted, adapted or endorsed the latest iteration of the ISTE Standards. All 50 states have used past iterations of the standards in an official capacity. See how Nevada is using the ISTE Standards.

Redefining Learning in a Technology-Driven World provides state leaders with a rationale for adopting the ISTE Standards, explaining the rapidly changing skill sets and competencies demanded from students. The report also details the research basis behind the standards.

Some state leaders choose to localize the language of the ISTE Standard to better fit their students' and educators' needs. Considerations for States Adapting the ISTE Standards dives into key questions that state leaders must keep in mind as they undergo this adaptation process.

Many states have updated their academic content standards to ensure that students graduate with the knowledge and skills necessary to succeed in postsecondary education and the workforce. The ISTE Standards Crosswalks provides examples of how three states have cross-referenced their existing academic content standards with the ISTE Standards to ensure that technology is a critical tool used by students to meet grade-level benchmarks.

BUILDING EDUCATORS' CAPACITIES TO USE EDTECH EFFECTIVELY

The ISTE Certification for Educators is a competency-based, device-neutral program that unpacks the ISTE Standards for Educators. This blended learning, competency-based program offers educators an opportunity to reimagine the use of educational technology in meaningful and transformative ways. Approximately 2,500 educators are currently on their way to earning an ISTE Certification.

ISTE recently coordinated with the National Association of State Boards of Education to develop Utah Banks on Statewide Approach to Adopting Education Technology. This case study details how state leaders developed the Digital Teaching and Learning grant program and formed a

partnership with the Utah Education Network to make the ISTE Certification program available to their educators. Additionally, this blog written with state leaders from Wyoming lays out how the state's leaders plan to use federal funds to strategically implement ISTE Certification in Wyoming.

ALLOCATING FUNDS TO BUILD EDUCATOR CAPACITY

Use this fact sheet to develop a basic understanding of Title IV-A. This resource includes a brief description of the grant program, how ESSA requires the funds to be distributed and the grant's recent appropriations history. Also, this infographic translates some of the most important points from the above fact sheet into an easy-to-understand one-pager. Use this resource to give your colleagues a brief overview about Title IV-A.

Watch this webinar to get the download on the rules and regulations that govern implementation of Title IV-A of ESSA in this informational webinar. Janice Mertes, assistant director of digital learning at the Wisconsin Department of Public Instruction, and Ally Bernstein, ISTE legislative counsel, explain the program and share the most appropriate edtech-related activities the newly-secured funding might be used for under Title IV-A

OTHER ISTE RESOURCES

Higher Education and Teacher Preparation

ISTE's Higher Education Recognition Program evaluates whether a particular teacher preparation program demonstrates alignment to the ISTE Standards for Educators and ensures that preservice candidates are ready to use technology effectively from day one. Master of Educational Technology programs at Fairfield University, Central Michigan University and the American College of Education have undergone this evaluation, earning their marks as ISTE-recognized higher education programs. See this blog, written with state leaders from Connecticut, about the role of teacher preparation programs in improving effective use of technology.

Edtech Purchasing

ISTE's Better Edtech Buying for Educators, developed with Project Unicorn, addresses five key areas — alignment with learning goals and standards, research and evidence, data interoperability and student privacy, implementation and ongoing support and educator partnerships — that state and district leaders must consider when purchasing edtech solutions. ISTE's Seal of Alignment program also recognizes edtech solution providers and products for their alignment to the ISTE Standards.

Media Literacy and Digital Citizenship

ISTE's digital citizenship page includes various resources that educators and education leaders can use to learn about what it means to both model and teach digital citizenship. ISTE also launched the #DigCitCommit Campaign, challenging stakeholders across the education sector to redefine digital citizenship from dissent and fear (i.e. don'ts) to, inclusivity, empathy and action (i.e. do's). This flyer outlines the full scope of the campaign.

Evidence-Based Practices & Learning Sciences
ESSA requires the use of federal funds for "evidence-based" programs and activities, providing a unique opportunity to examine classroom resources and strategies grounded in research. To support this effort, ISTE launched the Course of Mind initiative, which provides various resources on the learning sciences — podcasts, blog posts and online professional learning. Under this initiative, ISTE also published state and district policy recommendations that identify barriers and opportunities for implementing the learning sciences.

Adult Learning & Workforce Development
ISTE's SkillRise initiative helps organizations dedicated to adult learning advance the use of edtech to transform the lives of workers and help them thrive in their careers. The SkillRise Framework identifies seven competencies that address the qualities adult workers need in order to thrive in the digital workplace. The SkillRise initiative also provides several additional resources such as a free online course, podcast series and an online community of practice.