USING ESSA TO FUND EDTECH

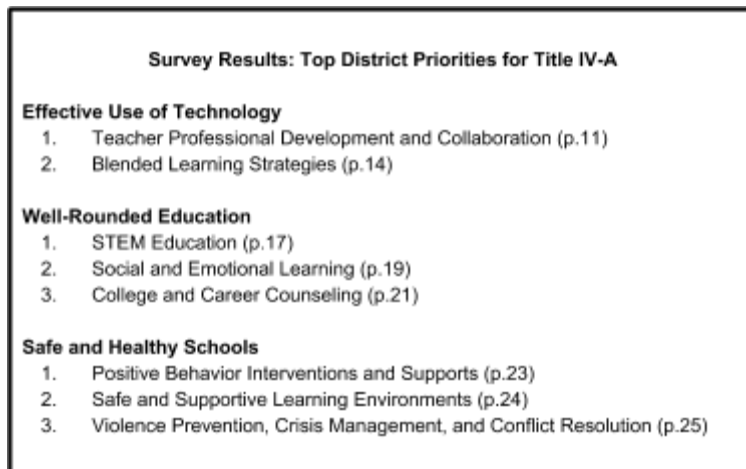Getting the Most Out of Title IV-A

December 2018

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. In fiscal year 2017 (FY17), only $400 million, or less than one-fourth of the authorized amount, was appropriated by Congress. Congress significantly increased funding in FY18 to $1.1 billion and again in FY19 to $1.17 billion. Because of the additional funds, states and districts can expect a large 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 decide which programs and activities they will prioritize for funding with the SSAE grant. In this guide, ISTE encourages states and districts to strongly consider the use 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 27 for specific examples of uses.[1]

In June 2018, the American Association of School Administrators, the National Association of Federal Program Administrators and Whiteboard Advisors conducted a national survey of 622 districts from 40 states and the District of Columbia, asking about their plans for allocating the SSAE grant. 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 exemplar cases across the country to demonstrate that technology can enrich and enhance all such uses of the SSAE grant. State and district leaders can use this guide as a resource as they develop their respective plans to allocate the SSAE grant (see "Procedures to Center Educational Technology in Title IV-A Funding Conversations" on page 5).

Survey Results: Top District Priorities for Title IV-A

Effective Use of Technology
1. Teacher Professional Development and Collaboration (p.11)
2. Blended Learning Strategies (p.14)

Well-Rounded Education
1. STEM Education (p.17)
2. Social and Emotional Learning (p.19)
3. College and Career Counseling (p.21)

Safe and Healthy Schools
1. Positive Behavior Interventions and Supports (p.23)
2. Safe and Supportive Learning Environments (p.24)
3. Violence Prevention, Crisis Management, and Conflict Resolution (p.25)

A CALL TO EXPAND PERSONALIZED PROFESSIONAL LEARNING OPPORTUNITIES

According to the U.S. Department of Education's Non-Regulatory Guidance on the SSAE grant (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."[2] This limit was set by Congress to ensure that a majority of Title IV-A funds are spent on developing

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[1] Products, services, and other resources referenced in this guide are examples and are not necessarily ISTE endorsements.
[2] Office of Elementary and Secondary Education. (2016). *Non-regulatory guidance: Student support and academic enrichment grants*. Washington, D.C.: U.S. Department of Education.

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 infrastructure before making new investments (see "Effective Use of Technology" on page 11).

Furthermore, research from the Stanford Center for Opportunity Policy in Education and the Alliance for Excellent Education finds that a teacher's knowledge of how best to use the digital tools available to them is a major variable affecting achievement gaps.[3] Therefore, ISTE recommends that states and districts invest a large portion of the SSAE grant into personalized professional learning opportunities to empower educators in using technology.

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[3] Darling-Hammond, L., Zielezinski, M. B., & Goldman, S. (2014). *Using technology to support at-risk students' learning*. Washington, D.C.: Alliance for Excellent Education.

Procedures to Center Educational Technology in Title IV-A Funding Conversations

As in-house experts in educational technology, state education technology directors and district technology coordinators are uniquely positioned to drive critical conversations about SSAE grant allocations. Below, ISTE recommends action steps for state education technology directors and district technology coordinators for using this guide to situate technology at the forefront of state and district Title IV-A funding decisions. Additional resources that may be helpful to this process can be accessed through ISTE's advocacy toolkit.[4]

ACTION STEPS FOR STATE EDUCATION TECHNOLOGY DIRECTORS

Understand the Local Landscape

1. *Identify your state's SSAE grant officer(s).*
   Who is responsible for managing the SSAE grant? This information is usually available on your state educational agency's (SEA) website. There may be one or more individuals assigned to this role. For example, 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 SSAE grant priorities.*
   Current state priorities 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 the SSAE grant. Nevada stated in a previous Title IV-A RFA that districts applying for funds should focus on improving school leadership, data-driven practices and underperforming schools.

3. *Conduct additional landscape research as necessary.*
   What are some examples of effective technology integration in your own state? Do these examples align with your state's current Title IV-A priorities, and/or could they be expanded through the SSAE grant? Ensure that your examples fall under the allowable uses of the SSAE grant (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 27). Having these examples in hand will help support your position as you interact with the state's SSAE grant officer(s) in subsequent steps.

Collaborate to Advocate for Technology

1. *Schedule a formal meeting with your state's SSAE grant officer(s).*
   Secure time to speak with your state's SSAE grant officer(s). In requesting a meeting, briefly mention the research and examples cited in this guide (pages 11 through 27). See Appendix A for an email template you can adapt according to your needs (page 28).

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[4] See Appendix B for a description of the resources available in ISTE's advocacy toolkit.

2. *At the meeting, make your case to the state's SSAE grant officer(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, as well as citing research and example cases that support this approach. Use relevant sections of the ISTE guide (pages 11 through 27) 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 SSAE grant officer(s).*

   Invite various 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 state 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 SSAE grant officer(s), present major "headlines" of the committee's findings to the state education chief.*

   The state superintendent of public instruction (or education commissioner) oversees the SEA by directing the implementation of policies and would 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 SSAE grant officer(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 the SSAE grant 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. The new RFA can also require districts

to submit their latest technology plan and demonstrate how their planned uses of the SSAE grant 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 SSAE grant 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 the SSAE grant (see the Wisconsin Department of Public Instruction's Title IV-A website for an example). This website can include general information about the grant, clearly outline the state's current priorities, specify the SSAE grant officer(s) and list relevant resources (e.g. this ISTE guide, the ED guidance, state RFA, etc.). 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 other types of technical assistance opportunities 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 SSAE grants, communicate the state's current priorities and provide information about the subgranting process. See Oklahoma's Title IV-A webinar series for an example.

ACTION STEPS FOR DISTRICT TECHNOLOGY COORDINATORS

Understand the Local Landscape

1. *Identify your district's SSAE grant officer(s).*
   Who in your local educational agency (LEA) is responsible for overseeing federal grants and program compliance? This individual could report to the district's academic chief, finance chief 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 the SSAE grant.*
   Your state may have specific priorities for how to spend the SSAE grant. 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. For example, Nevada stated on page 17 of a previous Title IV-A RFA that districts applying should focus on improving school leadership, data-driven practices and underperforming schools.

   For additional information regarding the state's current priorities, reach out directly to your state's officer who manages the SSAE grant. Their contact information is usually

available on your SEA's website. In some states, this officer serves as the head of a specific department. 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? Do these examples align with your state's current priorities, and/or could they be expanded through the SSAE grant? Ensure that your examples fall under the allowable uses of the SSAE grant (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 27). Having these examples in hand will help support your position as you interact with the district's SSAE grant officer(s) in subsequent steps.

Collaborate to Advocate for Technology

1. *Schedule a formal meeting with your district's SSAE grant officer(s).*

   Secure time to speak with your district's SSAE grant officer(s). In requesting a meeting, briefly mention the research and examples cited in this guide (pages 11 through 27). See Appendix A for an email template you can adapt according to your needs (page 28).

2. *At the meeting, make your case to the district's SSAE grant officer(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, as well as citing research and example cases that support this approach. Use relevant sections of the ISTE guide (pages 11 through 27) 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 SSAE grant officer(s).*

   Committee members should hold multiple opportunities to engage directly with district stakeholders to examine their needs in depth. This work may require consulting students, parents, school administrators, teachers 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 SSAE grant officer(s), present major "headlines" of the committee's findings to the district superintendent.*
   Identify and present two to three "headlines" of your committee's findings. 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 SSAE grant officer(s) to complete needs assessments and provide language for grant applications that will be submitted to the state.*
   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 the SSAE grant 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 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 28).

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 — describes in-depth how technology can support many of the allowable uses of the SSAE grant. 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 "Procedures to Center Educational Technology in Title IV-A Funding Conversations," 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 should start by identifying their state's current Title IV-A priorities, locating the corresponding subsection(s) in pages 11 through 27, and gathering the relevant information that would help support their position when meeting with the state or district SSAE grant officer(s). Examples of effective technology integration from their own state or district, which could be expanded through the SSAE grant, would also be a powerful advocacy tool.

Effective Use of Technology

RELEVANT ESSA PROVISIONS[5]

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

Online Professional Learning Opportunities
Technology enables innovative and personalized approaches to educator coaching and professional development. For example, the SSAE grant can be used by states and districts to form partnerships with organizations that provide teachers with flexible opportunities to engage in online professional learning opportunities.

Allowance under ESSA
The ED Guidance states that the SSAE grant may be used to "provide opportunities for more focused, relevant, and continuous professional development." The Office of Educational Technology's (OET) Dear Colleague Letter expands on the guidance by encouraging states and districts to invest ESSA funds into "educator communication and collaboration online."[6]

Evidence of Effectiveness
The Institute for Education Sciences' literature review on online professional learning communities suggests that they 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 flexibility by aligning discussion topics with individual interests, and provide consistent opportunities for novice teachers to receive mentoring.[7] 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."[8]

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[5] See ISTE's one-pager to read what ESSA's Title IV-A provisions mean and the required percentage distribution of funds.
[6] Office of Educational Technology. (2017). *Dear colleague letter: Federal funding for technology*. Washington, D.C.: U.S. Department of Education.
[7] 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.
[8] Office of Educational Technology. (2014). *The Future Ready district: Professional learning through online communities*. Washington, D.C.: U.S. Department of Education.

Exemplar Case 1

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 tools to ensure that learning was not limited to the day-long event. 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.[9]

Exemplar Case 2

ISTE provides several solutions for technology-enabled professional development. For example, ISTE members can engage with any number of its 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. Some districts have already dedicated Title IV-A funds for professional development resources provided by ISTE. Metropolitan School District of Steuben County in Indiana used their FY17 SSAE grant allocation to support their teachers' online book studies on two ISTE publications: Technology, Reading & Digital Literacy and Gamify Literacy.[10]

Exemplar Case 3

ISTE is showcasing models of effective online 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 introduce in their classrooms, including computational thinking and artificial intelligence. Participants progress through course content at their own pace with the guidance of a highly qualified instructor.[11]

Exemplar Case 4

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. In step 1, participants complete a two-day, face-to-face training from ISTE Certification Authorized Providers (CAPs), including the Midwest Education Technology Community (METC), Northwest Council for Computer Education (NCCE), New York State Association for Computers and Technologies in Education (NYSCATE) and Texas Computer Education Association (TCEA). In step 2, participants follow up by completing a 30-hour online course. Finally, in step 3, participants assemble a portfolio over the course of six months to be reviewed by ISTE

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

[10] 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

[11] ISTE. (2018). *ISTE U*. Retrieved from https://www.iste.org/learn/iste-u

Certification Evaluators. Participants who complete the program will earn recognition as an ISTE-certified educator.[12] 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.[13]

Recognition Systems Educators for Professional Learning
The SSAE grant can also be used to develop systems that recognize educators for engaging in professional development. Micro-credentialing is one performance-based reward system currently being explored by states and districts.

Allowance under ESSA

The ED Guidance cites micro-credentials as an example of how the SSAE grant may be used to "provide personalized professional development so that educators receive tailored, job-embedded support." The OET Dear Colleague Letter further supports the use of micro-credentials, recommending 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."

Evidence of Effectiveness

The American Institutes for Research[14] and the Friday Institute[15] 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.

Exemplar Case

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. Approximately 80 percent of teachers at Kettle Moraine have thus

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[12] ISTE. (2018). *ISTE Certification*. Retrieved from https://www.iste.org/learn/iste-certification
[13] Utah Education Network. (2018). *Checklist of minimum requirements for the educational technology endorsement*. Retrieved from https://www.uen.org/development/downloads/etep-app.pdf
[14] DeMonte, J. (2017). *Micro-credentials for teachers: What three early adopter states have learned so far*. Washington, D.C.: American Institutes for Research.
[15] 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.

far earned a micro-credential in topics ranging from strategies for close reading to fostering student resilience.

2. BLENDED LEARNING 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." States and districts can support blended learning initiatives with the SSAE grant by providing educators with sustained, job-embedded coaching opportunities.

Allowance under ESSA
The ED Guidance specifies that the SSAE grant "may be used for ongoing professional development on how to implement blended learning projects and to support planning activities." 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."

Evidence of Effectiveness
Research points to the effectiveness of blended learning approaches in the classroom. 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.[16] Several district-level case studies also corroborate this result. It is important to note that the National Center on Time and Learning, the authoring institution of the cases studies, recognizes the critical role of "coaching, peer observation, and/or professional development time — for staff to adjust to shifting roles in responsibilities within their blended settings," which contributed to the success of these blended learning initiatives.[17]

Exemplar Case 1
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. Moving forward, 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.[18]

Exemplar Case 2
The Highlander Institute offers a blended learning course through the ISTE U platform to help K-12 teachers implement student-centered instructional strategies in their classrooms. The

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[16] 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.

[17] Chan, R. (2015). *Supporting student success through time and technology.* Boston, MA: National Center on Time and Learning.

[18] Williams, M. (2017). *Temple ISD approves curriculum purchases.* Temple, TX: Temple Daily Telegram.

Highlander Institute also offers [job-embedded coaching](#) services to further support educators' blended learning efforts throughout the school year.[19]

Purchasing Devices to Support Blended Learning

Blended learning can be supported by the SSAE grant through the purchase of mobile learning devices that can adapt to different learning spaces (e.g. laptop computers, tablets). 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 the SSAE grant "may be used to build technology capacity and infrastructure, which includes … purchasing devices, equipment and software to increase readiness." 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."

Important Considerations

ISTE recommends that states and districts deliberately consider several key questions prior to any purchase of digital tools or services. Can the state and district budget sustain the total cost of ownership for the new resource, including maintenance and required professional development? Does the state or district have the necessary digital infrastructure (e.g. devices, bandwidth, and access points) to support proper implementation of the new resource? Does the new resource promote the active use of technology and is it accessible to different student populations?

Relevant Research

States and districts must additionally 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.[20] This finding points 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 tools and applications. Mathematica's [Ed Tech Rapid Cycle Evaluation (RCE) Coach](#) also guides users on how to properly initiate pilot programs and interpret resulting data.

Exemplar Case 1

[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)

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[19] ISTE. (2018). *Personalized and blended learning*. Retrieved from https://www.iste.org/learn/iste-u/personalized-blended-learning
[20] ISTE. (2018). *Study finds even tech-savvy educators struggle to find reliable research on edtech*. Retrieved from https://www.iste.org/explore/articleDetail?articleid=2242&category=Press-Releases&article=Study+Finds+Even+Tech-Savvy+Educators+Struggle+to+Find+Reliable+Research+on+Edtech

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 <u>Microsoft Innovative Educators</u>.[21]

Exemplar Case 2

In 2013, <u>Clarksdale Municipal School District</u> 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 <u>iRead</u>, 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.[22]

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

[22] Place, K. & Manley, M. (2017). *Clarksdale Municipal School District: How to make sense of mixed results?* Washington, D.C.: Mathematica Policy Research.

Well-Rounded Education

RELEVANT ESSA PROVISIONS[23]

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 large issue in STEM education. Organizations like CSEdweek note that STEM courses offered in schools do not currently meet the demands of employers.[24] 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 the SSAE grant to provide professional learning for STEM educators, stating, "An LEA may use funds for programming and activities to improve instruction … in STEM subjects." 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."

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.[25]

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[23] See ISTE's one-pager to read what ESSA's Title IV-A provisions mean and the required percentage distribution of funds.
[24] Computer Science Education Week. (2018). *Blurbs and useful stats*. Retrieved from https://csedweek.org/resource_kit/blurbs
[25] 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

Below are some examples of STEM professional development programs that leverage technology to meet these recommendations.

Exemplar Case 1

[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. 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.[26]

Exemplar Case 2

At the Midwest Education Technology Community's (METC) [STEM Academy](#), educators learn about project-based learning, real-world problem-solving and team-building concepts through "virtual field trips and regional excursions, as well as … hands-on [STEM] activities." Educators can also participate in a professional learning network and collaborate via online chats and discussion forums. Lastly, educators design STEM lessons and activities by using various technology tools, including open education resources, [Google Apps](#) and [Discovery Education](#).[27]

Exemplar Case 3

Communication technology tools 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).[28] [New Mexico](#) similarly plans to use the SSAE grant to create statewide STEM professional learning communities where educators can discuss research-based instructional practices.[29]

Exemplar Case 4

ISTE members can join the [STEM professional learning network](#) (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.[30]

[26] 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/
[27] Midwest Education Technology Community. (2018). *STEM & MakerEd Academy*. Retrieved from https://metcedplus.org/mod/page/view.php?id=217
[28] 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
[29] 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
[30] ISTE STEM. (n.d.). *About us*. Retrieved from https://sites.google.com/view/iste17stempln/about-us?authuser=0

Assistive Technologies to Support STEM Education

Another way to tackle the STEM equity issue is by directly investing in digital tools 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 SSAE grant may be used to increase "access for groups of underrepresented students to high-quality courses."

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.[31] A literature review about multisensory technologies in STEM education corroborates this result, finding overall positive effects on student learning and engagement.[32]

Exemplar Case 1

Several federally funded projects are developing assistive technologies to specifically increase access to STEM education. OET's 2017 National Education Technology Plan (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."[33]

Exemplar Case 2

Hamilton Crossing Elementary School in Georgia leveraged the SSAE grant to fund 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.[34]

2. SOCIAL AND EMOTIONAL LEARNING (SEL)

Digital Citizenship

SEL is colloquially referred to as "soft skills," encompassing behaviors such as empathy, resilience and self-control. With one out of three middle and high school students having experienced a form of cyberbullying[35], 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

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[31] 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. https://scholarworks.rit.edu/jsesd/vol19/iss1/7

[32] 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

[33] 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.

[34] 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

[35] Hinduja, S. & Patchin, J. W. (2013). *Cyberbullying: Identification, prevention, and response*. Cyberbullying Research Center.

the ISTE Standards for Students[36] 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," should be a critical component of any SEL curriculum. States and districts can use the SSAE grant to invest in professional learning programs that help educators better understand the principles of digital citizenship.

Allowance under ESSA

The ED Guidance states that the SSAE grant may be used toward "activities in social emotional learning, including interventions that build resilience, self-control, empathy, persistence, and other social and behavioral skills."

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 tools for democratic participation.[37] However, educators indicate a lack of preparation to teach digital citizenship. 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."[38]

Exemplar Case 1

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.[39]

Exemplar Case 2

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

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[36] ISTE. (2017). *ISTE Standards for Students*. Arlington, VA: ISTE.

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

[38]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.

[39] 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

digital citizenship beyond online safety, helping educators convey to students that technology is capable of creating social good.[40]

Game-Based SEL Interventions

States and districts can use the SSAE grant 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."

Allowance under ESSA

The ED Guidance states that the SSAE grant may be used toward "activities in social emotional learning, including interventions that build resilience, self-control, empathy, persistence, and other social and behavioral skills."

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.[41] Other researchers state that game-based interventions enable students to practice skills in a safe, controlled environment.[42] Lastly, peer-reviewed publications from the 3C Institute indicate that game-based interventions lead to decreases in behavior referrals and in-school suspensions.[43]

Exemplar Case

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."[32]

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.

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[40] ISTE. (2018). *Digital citizenship in action: Online course syllabus.* Retrieved from
https://www.iste.org/docs/isteu-docs/abbreviated-digital-citizenship-course-syllabus.pdf
[41] World Economic Forum & Boston Consulting Group. (2016). *New vision for education: Fostering social and emotional learning through technology.* Cologny, Switzerland: World Economic Forum.
[42] 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
[43] 3C Institute. (n.d.). *Articles.* Retrieved from https://www.3cisd.com/articles

Discouragingly, ASCA and NACAC find a national [482:1 ratio](#).[44] 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.[45] The SSAE grant 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 the SSAE grant 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."

Evidence of Effectiveness

Past research has demonstrated the effectiveness of using communication technology to increase student achievement through family engagement.[46, 47] Researchers also suggest that 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 plan."[48]

Exemplar Case

[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 will, 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.[49]

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[44] 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.

[45] The Education Trust. (2018). *Equality isn't equity: Every student needs a great school counselor.* Arlington, VA: NACAC.

[46] 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

[47] Bergman, P. (2015). *Parent-child information frictions and human capital investment: Evidence from a field experiment.* Munich, Germany: CESifo.

[48] 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

[49] 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[50]

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 interventions practices along a multi-tiered continuum that supports the academic, social, emotional, and behavioral supports of all students."[51] Karen Giffords, director of the Behavior Education Technology Conference, argues that technology can support PBIS implementation by providing "streamlined professional development."[52] 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 SSAE grant may be used "to implement school-wide positive behavioral interventions and supports (PBIS)."

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."[53]

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[50] See ISTE's one-pager to read what ESSA's Title IV-A provisions mean and the required percentage distribution of funds.
[51] National Technical Assistance Center on PBIS. (2018). *PBIS FAQs.* Retrieved from https://www.pbis.org/school/swpbis-for-beginners/pbis-faqs#briefintro
[52] 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/
[53] 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, DC: National Technical Assistance Center on PBIS.

Exemplar Case

Wentzville R-IV School District[54] 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 LiveBinder as 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 as a platform 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.

2. SAFE AND SUPPORTIVE LEARNING ENVIRONMENTS

Increasing Student Engagement

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.[55] Many schools take a reactionary approach to such behavioral issues, including suspensions and expulsions, which disproportionately affect students of color.[56] Technology, on the other hand, offers an alternative, proactive and preventive solution. Research suggests that increasing student engagement 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 the SSAE grant may be used to promote "supportive school climates to reduce the use of exclusionary discipline and promoting supportive school discipline."

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

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[54] 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
[55] 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.
[56] Loveless, T. (2017). *2017 Brown Center report on American education: Race and school suspensions*. Washington, D.C.: The Brookings Institution.

tended to engage in increased delinquency and substance use over time."[57] The Johns Hopkins Urban Health Institute corroborates this finding, arguing 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.[58]

Exemplar Case

Under the ConnectED Initiative that aimed to provide broadband connectivity to underserved classrooms, Apple committed $100 million in philanthropic efforts. 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. 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 digital tools to develop new, healthy ways to express themselves. As a result, Pendergast Elementary School observed the number of office referrals cut in half (636 office referrals in the '15-'16 school year to 305 in the subsequent year).[59]

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 guidelines for school violence prevention. 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.

Allowance under ESSA

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

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[57] 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
[58] Blum, L. M. (n.d.). *Best practices for effective schools*. Baltimore, MD: Johns Hopkins Urban Health Institute.
[59] 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/

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.[60] 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.[61]

Exemplar Case 1

Several districts have invested in digital tools that support data-driven counseling. For example, Wake County Public School System[62] counselors 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. On the other hand, Montgomery County Public Schools' Social and Emotional Support Staff[63] 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 (type of school, student age range) and services provided at different schools (group counseling, mental health referrals, crisis interventions, etc.). This virtual hub is used to create dynamic data visualizations that inform decisions (e.g. Which student requires the most help? What are the factors associated with their school? What programs at their school need additional support?).

Exemplar Case 2

Humble Independent School District[64] in Texas is using an application called "iHELP" to gather data about incidents that threaten student safety and require serious attention. Downloadable for free onto mobile devices, iHELP allows students, parents and guardians to anonymously submit online reports to school administrators, counselors, law enforcement officers and after-school community centers, who will then collaborate to conduct the appropriate intervention. Through the application, students, parents and guardians can also contact a 24-hour crisis management office if they require immediate help. In the first year of implementation, Humble received hundreds of reports ranging from bullying and harassment to substance abuse. Most incidents were handled through counseling and behavioral services. Only 8 percent of incidents required police services.[65]

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[60] 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

[61] 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

[62] 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

[63] 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

[64] Humble Independent School District. (2017). *iHelp.* Retrieved from https://www.humbleisd.net/Page/95754

[65] Feuk, M. (2018). Humble ISD safety app utilized in its first year, stats show. *Houston Chronicle.* Retrieved from https://www.chron.com/neighborhood/humble/news/article/Humble-ISD-safety-app-utilized-in-its-first-year-12997757.php

Conclusion: Why Does Title IV-A Matter?

The SSAE 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 two funding categories (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."[66] Federal funds provided through the SSAE grant 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, the Alliance for Excellent Education and the State Educational Technology Directors Association (SETDA) — 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.

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[66] Baker, B. (2018). *How money matters for schools.* Washington, D.C.: Learning Policy Institute.

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 SSAE grant allocations. 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 19).

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 tools 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, online 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 the SSAE grant 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, here is a recent story about how Alisal Union School District in California benefited from enrolling their teachers in an online digital citizenship academy.

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 Advocacy 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.

Title IV-A Fact Sheet

Use this fact sheet to develop a basic understanding of Title IV-A. This resource includes a brief description of the SSAE grant program, how ESSA requires the funds to be distributed and the grant's recent appropriations history.

Title IV-A Infographic

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.

Title IV-A Implementation Primer

This implementation primer expands on the fact sheet by providing concrete steps for how to place educational technology at the forefront of state and district Title IV-A funding decisions and additional recommendations for spending the SSAE grant.

Title IV-A Webinar

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 rules and regulations of the program and share the most appropriate edtech-related activities the newly secured funding might be used for under the SSAE grant program.

Appendix C: Acknowledgments

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