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EDUCATIONAL TECHNOLOGY PLAN: July 1, 2015-June 30, 2018

District/Agency	Area Cooperative Educational Services (ACES)	
LEA Code	244	
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Signature of Superintendent or Executive Director	Signature: Thomas W. Danehy	Date: 6/11/15
Date Submitted to Board of Education	6/11/15	
Date Approved by Board of Education	6/11/15	

Information, Communication, and Technology (ICT) Plan Preparation Check-Off Page

The submitted plan includes the following:

- Cover Page
- ICT Plan Preparation Check-Off Page
- Executive Summary
- LEA Profile
  - Technology Planning Committee
  - Vision Statement
- Needs Assessment – Environmental Scanning
  - Status of 2012-2015 Themes
  - External Factors: Sociocultural; technological; economic; environmental; and political (STEEP).
  - Internal Factors – 14 Essential Conditions (ISTE, 2015): (1) Shared vision; (2) empowered leaders; (3) implementation planning; (4) consistent and adequate funding; (5) equitable access; (6) skilled personnel; (7) ongoing professional learning; (8) technical support; (9) curriculum framework; (10) student-centered learning; (11) assessment and evaluation; (12) engaged communities; (13) support policies; and (14) supportive external context.
- Goals (USDE, 2010): (1) Learning – engage and empower; (2) assessment – measure what matters; (3) teaching – prepare and connect; (4) infrastructure – access and enable; (5) productivity – redesign and transform; and (6) research and development – innovate and scale.
- Children's Internet Protection Act (CIPA) Certification
- References
- Appendix
  - A: 2015 Speak-Up Survey results are available through the ACES AITC Intranet site at https://interfaces.aces.org/cpd/et/aitc/Shared%20Documents/TechnologyPlan

Executive Summary and Themes

After the executive summary and themes, the ACES Internal Technology Committee (AITC) presents the plan in three sections suggested by the CSDE: (1) LEA profile and technology vision statement aligned with the ACES mission and strategic objectives; (2) needs assessment using an environmental scanning framework; and (3) plan implementation for ongoing support and addressing the new themes.

Part 1: LEA Profile

The local education agency (LEA Profile) includes reporting of technology literacy of learners (adults and students), technology related policies, planning participation and communication, available technology and software, technology planning committee and responsibilities, evaluation strategies, and the technology vision statement.

Evaluation Strategies	Process Description
Needs assessment tools	AITC evidence-based tools: - International Society of Technology in Education (ISTE) essential conditions framework for focus groups (guiding questions) - ISTE's National Educational Technology Standards (NETS) for students, teachers, and administrators - ISTE's Lead and Transform Self-Assessment diagnostic tool - SpeakUp annual national survey tool and reports
Needs assessment process	- AITC examination of essential conditions and status of the 2012-2015 plan - December 2014, administered national SpeakUp survey to parents, students, and staff - January 2015, researched external emerging trends in educational technology - January-April 2015, held focus groups - May 2015, technology leaders and executive team participated in Lead and Transform diagnostic tool - February-May 2015, examined external evidence and internal data (survey results and focus groups data) for strengths, weaknesses, threats, and opportunities (SWOT) to arrive at new emerging themes and corresponding goal action plans

Part 2: Needs Assessment

The needs assessment is presented in three sections: (1) status of past themes and goals; (2) external trends; (3) internal trends through examination of evidence using a SWOT analysis reporting tool; and (4) new emerging themes.

Past Themes	Recap of July 1, 2012 – June 30, 2015 Themes and Status *In addition to continuous support of technology integration at ACES, the following themes emerged from our last technology planning process.*
One-to-one laptop initiative	For the past ten years, ACES has had one-to-one laptops for students in Grades 6-8 at TEMS and WIMS. Throughout the past three years, ACES has researched reallocation of equipment, newer equipment options (e.g., iPads, Chromebooks), examined budget

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	requirements, and applied for grants to move towards one-to-one laptop status for K-12 students. The fiscal year 2015-2016 budget and current CSDE grant opportunities allow ACES to achieve this theme for students.
Interactive white boards (IWB)	The IWB project included equipment installations in every instructional classroom area (257 installations) from January through August 2015. The installations were followed with series of workshops for teachers to understand how to use the tool and software to improve instruction. Results from the SpeakUp Survey and feedback from committee meetings and focus groups showed positive results and engagement of students.
Bring your own device (BYOD)	BYOD is ready and available in every building. Awareness sessions were held at building-level committee and staff meetings. Teachers were empowered with the ability to say when and how BYOD would be used at the individual classroom level to improve student learning. Focus group results showed positive BYOD usage even with one-to-one laptops.
Cloud computing	ACES has two formal cloud solutions. For ACES staff-only storage, the ACES SharePoint site including Microsoft OneDrive (interfACES) is our FERPA and HIPPA compliant cloud. For collaboration outside of ACES and with students, ACES is a Google for Education school system. The roll-out of cloud solutions included workshops on understanding when to use which solution and CIPA compliance. In addition, the instruction included understanding other third-party solutions that staff may need to use but are not maintained by ACES (e.g., DropBox, EverNote, LiveBinder).
Virtual libraries	ACES upgraded all the physical library systems to the Follett Destiny online system, including the options for access from home, textbook, and resources.
Action research	AITC added weekly, rotating PLC subgroups to research evidence-based best practices for technology integration. The monthly committee meetings include reporting of findings from the weekly, rotating sub-groups.
School 2.0 framework	ACES used the ISTE School 2.0 workbook and online tool to examine essential conditions needed for instructional areas. The results of this work was used to plan the IWB, Cloud, BYOD, and one-to-one laptop research.
Walk-throughs and observation tools	In 2012, an ACES enterprise grant funded the first "Administrator's Tool Box" project. Through this initiative, ACES administrators received iPads to assist in collecting evidence during walk-throughs and classroom visits. The project included three-days of workshops for administrators and experience for technology staff to support multiple devices at ACES and other school districts. ACES adopted the CSDE provided BloomBoard software to assist educators in gathering evidence for evaluation and observations.

New Emerging Themes for July 1, 2015 – June 30, 2018

NOTE: A difference found in comparing the emerging themes from 2011 to 2015 is that the stakeholders' thinking shifted from 'things' (e.g., interactive white boards) to processes (e.g., personalized learning and innovation diffusion).

The why:

- Digital citizenship and literacy
- Personalized and blended learning using universal design (for adults and students)
- Equitable access – one-to-one and BYOD for staff and students
- Project-based and active learning – Makers' Spaces

The how – Innovation diffusion and scaling:

- Evidence-based practices and action research
- Ongoing professional learning
  - Self-directedness
  - Face-to-face: Workshops, PLCs, lead teachers, and staff meeting discussions
  - Online resources curated into the learning management system
- Continuous communication and collaboration to build awareness and experimentation through existing PLC communication channels and staff meetings
- Continuous support after initial rollouts
- Develop 'champions' in each building

Part 3: Plan Implementation

The last section reports how the plan will be implemented. It is presented using the national and CSDE six goal areas for educational technology: (1) learning – engage and empower; (2) assessment – measure what matters; (3) teaching – prepare and connect; (4) infrastructure – access and enable; (5) productivity – redesign and transform; and (6) research and development – innovate and scale.

LEA Profile

The LEA profile provides a "snapshot" of the ACES district. It helps planners and reviewers understand areas of need.

Technology Literacy	
Questions (During the 2014-2015 school year, …)	***ACES***

During the 2014-2015 school year, how many Grade 8 students were evaluated for technological literacy based on your district's standards?
• *Technology is assessed through the following tools:*
  ▪ *Students identified as taking the alternative assessment for special needs are exempt from the Grade 8 technology literacy mandate. Their technology assessment includes Unique Curriculum's standardized assessments for communication and acceptable use competencies.*
  ▪ *All students complete the acceptable use checklist activity as an initial assessment of literacy.*
  ▪ *Technology may be further assessed through a standardized six project-based learning activities (Edvation's TechSteps) per grade level per year K-8 (http://www.edvation.com/techsteps).*
• *TEMS = 226 (AUP Checklist, TechSteps); WIMS = 64 (AUP Checklist, TechSteps); MILL = 25 (AUP Checklist); Village = 17(AUP Checklist, Unique Curriculum); SAILS = 3 (AUP Checklist); North = 1(AUP Checklist)*
	336 8th grade students

How many of those students were considered technologically literate based on that evaluation? • *75% = 252/336 8th grade students*	***252 students***
How many hours of technology-related professional development (PD) were offered to certified educators in 2014-2015, including workshop hours that are offered to all of your educations (both teachers and administrators)? These sessions may be online and may include full-day or partial-day sessions provided by RESC personnel. Although both mentoring and coaching are considered very effective methods of offering PD, do not include any of those hours. • *2 days per week * 7 hours per day * 45 weeks*	***630 hours***
How many hours of technology-related professional development were offered to administrators in 2014-2015? Count only those PD hours offered specifically for administrators. • *Understanding Interactive White Boards and Smart Notebook Tools (2 hours), Using Excel for Tracking SLO/IAGD Progress (10 hours), Bloom Board Reporting (2 hours), Introduction to Canvas Learning Management System (4 hours), Smarter Balanced Online Tools (2 hours), Social Media*	***30.5 hours***

Technology Literacy

Questions (During the 2014-2015 school year, …)	***ACES***
for Administrators (2 hours), Google Docs (2 hours), Linked In (2 hours), Living in the Cloud (2 hours), School Messenger (1.5 hours), Introduction to Google Docs (1 hour)	
How many hours of technology related professional development were offered to all staff in 2014-2015? (New) - *November Convocation – Munis (2 hours), Excel (2 hours), PowerSchool Reporting (2 hours)* - *Staff professional development has been noted as an area of need. In 2015, ACES purchased Lynda.com for self-directed learning of technology-related topics. As of April 2015, 110 users have watched 513 educational technology-related training videos (28 hours).*	***34 hours***
What is the level of technological literacy of ACES staff?	

From Speak Up Survey – Educators (106) How would you rate your technology skills? Response	***# of Responses***	***% of Responses***	***State %***	***National %***
Advanced - My skills are more advanced than most adults I know	*28*	*28%*	*39%*	*32%*
Average - My skills are similar to those of the adults I know	*69*	*68%*	*58%*	*64%*
Beginner - I'm just learning to use technology tools	*4*	*4%*	*3%*	*4%*

Policies

Question	**ACES**
How often are your Acceptable Use Policy (AUP) and other technology-related policies updated (please check one below)? ☒ Every year ☐ Every other year ☐ At least every three years ☐ Other: _____	Annual
Insert a link to your district's AUP below if it is stored on the Web. *www.aces.org*	
What AUP related documents are reviewed? - *AUP Policy - 4118.5 (Staff) and 6141.321 (Students)* - *Parent/Guardian Release Form (English, Spanish)* - *AUP Code of Conduct for Primary (English, Spanish)* - *AUP Code of Conduct for Middle (English, Spanish)* - *AUP Code of Conduct for High School and Family Friendly (English, Spanish)* - *Special Projects Permission Template* - *Social Media Governance*	11 documents

Policies	
Question	**ACES**
- *Parent/Guardian Student Agreement Distribution and Use of Laptop* - *FAQs for Teachers about which form gives which permission* - *ACES District Teachers and Students AUP Code of Conduct* - *ACES BYOD Governance Document*	

Technology Planning Participation and Communications	
Questions	***ACES***

During the 2014-2015 school year, how many hours were dedicated to technology integration planning with teams of teachers, administrators, and technology support staff?
- *Building-level technology monthly meetings*
  - *North = 9 months * 1 hour/month = 9 hours*
  - *WIMS = 9 months * 1 hour/month = 9 hours*
  - *TEMS = 9 months * 1 hour/month = 9 hours*
  - *AT (Village/WHEW/SAILS) = 9 months * 1 hour/month = 9 hours*
- *District-level technology meetings*
  - *AITC (monthly) = 9 months * 1 hour/month = 9 hours*
  - *AITC PLC sub-groups(weekly) = 9 months * 4 meetings/month * 2 hours/meeting = 72 hours*
  - *District data team (every other month) = 5 meetings * 1 hour/meeting = 5 hours*
- *Tech Council and user groups (quarterly) = 4 meetings * 3 hours/meeting = 12 hours*
	134 hours

How many educational technology end-users participated in technology related surveys or focus groups? - *Grades K-2 = 199; Grades 3-5 = 211; Grades 6-8 = 826* - *Parents = 127* - *Teachers = 106; Library Media Specialists = 5* - *District Administrators = 1; School Administrators = 2; Technology Leaders = 3*	***1,482***

Questions
During the 2014-2015 school year, what were the equipment ratio available per building for students and teachers? - *Every full-time teacher is provided with a laptop.* - *Computer-to-student rations:*   - *ECA: 1-to-3.59 (80 computers for 287 students)*

Questions
⌨ *Mill Road: 1-to-1.62 (120 computer for 194 students)* ⌨ *SAILS: 1-to-2.86 (14 computers for 40 students)* ⌨ *TEMS: 1-to-0.78 (906 computers for 705 students – includes laptops, classroom desktops, 2.5 labs with desktops, and spares)* ⌨ *Village: 1-to-2.88 (58 computers for 167 students)* ⌨ *WHE/W: 1-to-1.88 (85 computers for 160 students)* ⌨ *WHN: 1-to-1.14 (84 computers for 96 students)* ⌨ *WIMS K-5: 1-to-2.43 (169 computers for 411 students – includes laptops in carts, desktops in classroom, and 2 labs with desktops)* ⌨ *WIMS 6-8: 1-to-0.76 (270 computers for 206 students – includes laptops, classroom desktops, and spares)*
During the 2014-2015 school year, what was the BYOD access was available per building for students, staff, and guests? 🖱 *BYOD ready: All schools* 🖱 *BYOD for guests: All schools* 🖱 *BYOD for staff: All schools* 🖱 *BYOD for students: ECA, Mill Road, and TEMS*

Technology Software
Question
During the 2014-2015 school year, what are the managed software subscriptions supporting student learning? 🖱 *Accessible Books Collection, Adobe Creative Cloud, Britannica Online, CANVAS, Career Cruising, Cengage Learning, ChildPlus, Discovery (United Streaming), Earobics, Edgenuity, edHelper, Edvation (Tech Steps, edClass, PD21), Follett, Google Apps for Education, IEP Direct, iReady, IXL-ELA, IXL-Math, Learning A-Z , Lexia Online-Learning Foundation, Lynda-Atomic, Make Music, Moodle, MS School Agreement academic desktop, MS School Agreement for servers, News2You, Pearson Interactive Science, PowerSchool, Premier, Quia, Razz Kids, Read Outloud, Read Write Gold, School Messenger-Reliance, Schoology, SharePoint (interfACES), Smart Notebook Software Advantage, Spellzone, StarFall, Sunburst Type-to-Learn, SWISS, Teaching Strategies Gold, Unique Curriculum, Visual Thesaurus-Think Map, Voice Threads, WikiSpaces, World Book, Write Online* 🖱 *Additional software is budgeted by building, grade, and developmental levels.* 🖱 *Over 3,000 software applications and 'apps' are approved by AITC for educational use.*

Technology Planning Committee

The ACES Internal Technology Committee (AITC) represents the Technology Planning Committee. Development of the technology plan and implementation of the plan should enable parents, educators, students and community members to benefit from the investment in technology and all should have representation on the committee (CSDE, 2012, p. 8).

ACES Technology Planning Committee Members	
Member	**Title (Constituency Represented[1])**
LeeAnn Browett	Social Studies Curriculum Coordinator
Fran Castiello	Technology Coordinator, TEMS
Dee Colson	Secretary, Technology Services
Joanna Dorne	Language Arts Curriculum Coordinator
Carol Goldberg	Secretary, WIMS
John Gustafson	Staff Assistant, Professional Development and School Improvement (PDSI)
Barbara Hedberg	Library Media Specialist (MILL)
Jason Hiruo	Principal (ECA)
Michael LaCroix	Teacher, NORTH
Steven Manley	Director, Technology Services
Carol May	Technology Coordinator, WIMS
Anne Pember	Mathematics Curriculum Coordinator
Stephanie Swan	Assistive Technology Team, VILLAGE & WHEW
Wanda Wagner	Educational Technology Director
Marcia Yoia	Library Media Specialist, TEMS

[1] Schools: Collaboratives; Educational Center for the Arts (ECA); Mill Road School (MILL); Thomas Edison Middle School (TEMS); Village School (VILLAGE); Whitney High School East and West (WHEW); Whitney High School North (NORTH); Wintergreen Interdistrict Magnet School (WIMS)

ACES Technology Planning Focus Groups	
School or Program	**Members**
Mill Road	Miguel Corchado, Kerri Gilmore, Barbara Hedberg, Shelby Ludden, Bryan Markiewicz, Ryan Oberhauser, Pat Perno, Cindy Ratchelous
Technology Services	Wade Arenberg, Dee Colson, Kevin Culvert, Pam Davis, Lon Harrigan, Steve Lang, Kim Mcguffie, Jim Moyle, Paul Savard, Bob Tatham
WIMS	WIMS Leadership Team: Christine Blackler, Carolyn Chirico, Suzanne Duran-Crelin, Monica Gagliardi, Christie Hull, Imani Jones, Carol May, Amy Perrone, Jennifer Place, David Ridgway, Vicki Rose, Carmella Rossomando, Mary Ellen Rourke, Charaine Virgo, Debbye Vitti, Anna Wasiolek
TEMS	Fran Castiello, Brett Boyd, Vicki Hulse, Michael Robichaud, Marcia Yoia, Samantha Zatarain
NORTH	Diane Brignola, Michael LaCroix, Fred Oglesby, Bert Rodriquez
Village, Sails, WHEW	AT Team: Carol Bunk, Eric Carson, Gina Drury, Rose Morrow, Leslie Peters, Merri Stanley-Puglesi, Stephanie Swan
Curriculum	LeeAnn Browett, Joanna Dorne, Anne Pember
Executive Team	Claudette Beamon, Tom Danehy, Erika Forte

ACES Technology Committee's Roles and Evaluation Strategies	
CSDE Questions	**ACES Technology Committee Responses**
Role	The committee's role is to ensure that all aspects of the organization's information and technology needs are addressed through the ongoing development and implementation of the technology plan serving ACES.
Member Categories	The technology committee members represent each school and program in the agency. The committee invites programs at ACES to send representative members: administrators; teachers; and support staff.
Schedule	The full committee meets once a month. The committee's sub-topic PLCs meet weekly.
Evaluation Strategies	Environmental Scan – Summative • The needs assessment began with an examination of the status of past themes. • The needs assessment includes continuous environmental scanning and analysis to improve the ability of ACES to support schools to proactively prepare college, career, and life-ready students and future citizens. Environmental scanning includes examining internal and external factors and emerging trends around the K-12 education sector (Conway, 2012; Choo, 2011; Morris, 1992b). These factors are categorized by macro-society environments, that is, sociocultural, technological,

ACES Technology Committee's Roles and Evaluation Strategies	
CSDE Questions	**ACES Technology Committee Responses**
	environmental, economical, and political-legal (STEEP). In addition, the factors are categorized by micro task environments (governments, community, customers, suppliers, shareholders, employees, competitors, and trade associations). These factors may be at the local, state, federal, and global levels. The external factors will be categories as trend ecosystems (things, happenings, trends, and drivers) (Conway, 2007; Morrison, 1992b). To control for biases and blinders (Bates, 1989; Rohse & Anderson, 2006), external factors were evaluated and ranked using the credibility, accuracy, reasonableness, and support (CARS) analysis tool (Granite State College Library, 2013). Surveys and Focus Groups • ACES participated in the 2014 Speak-Up National Educational Technology Survey: 199 grades K-2 students; 211 grades 3-5 students; 826 grades 6-8 students; 127 parents; 106 teachers/staff; 5 library media specialists; and 6 technology leaders. • ISTE Essential Conditions: A sub-group of AITC members used the evidence-based ISTE (2015) essential conditions as bases for the survey tool and focus group meetings. The focus groups were building based and included a mix of stakeholders (e.g., teachers, school-based administrators, technology support staff, and non-certified staff). • AITC Guiding Questions: Using a set of guiding questions suggested by ISTE and further developed by SETDA and CoSN, AITC members used face-to-face meetings with a collaborative, shared document to post responses. • Rubrics: Using the ISTE rubric sets and the results of our surveys and focus groups, AITC recorded the responses for each essential condition objective on a scale of 1-4 (1=Pre-Awareness, 2=Awareness, 3=Adoption, 4=Maintenance). • ISTE Lead & Transform Technology Survey for Technology Leaders Calibration: Both technology leaders completed the survey; discussed results; and re-administered the survey examining new thinking based on the discussion and evidence from the SpeakUp Survey results. The diagnostic tool was used with the ACES Executive Team. The tool reports scores for the 14 Essential Conditions. The combined scores were compared and analyzed. • Strengths and Weaknesses: Using all of our evaluation data, AITC members identified areas of strengths and weaknesses for each needs assessment areas. Areas of strength were those with a score of 3-4; areas of weakness were those with a score of 1-2. All guiding questions' responses and survey open-ended responses were identified based on prompts for "successes" (strengths) or "weaknesses" (challenges or roadblocks). • Goals: AITC reported on each of the six USDE (2010) goal areas from the previous Technology Plan, identifying which strategies were either completed or ongoing. Then, we created new strategies to address responses from our needs assessment activities. Formative • PLC Data Team Feedback: Starting in 2009, ACES began intensive application of the Professional Learning Community (PLC) philosophy. Starting in 2012, AITC

ACES Technology Committee's Roles and Evaluation Strategies	
CSDE Questions	**ACES Technology Committee Responses**
	members began to meet weekly in SLC (Small Learning Communities) with themed meetings based on the technology plan evidence-based emerging themes. The sub-groups used evidence-based research and best practices to create shared resources to be used across the district to field test and roll-out technology-related initiatives. - Educational Technology Professional Development Assessment: As workshops and coaching sessions are provided, the Director of Educational Technology uses Bozarth's (2008) Formative Self-Evaluation Tool as a pre- and post-test of learning reflection, self-assessment, and ownership of new learning.
Technology Vision Statement Conditions	The Committee created the ACES technology vision statement using the following framing documents: - ACES Beliefs[2] - ACES Mission[3] - ACES Objectives[4] - ACES Strategic Parameters[5] - ACES Strategies[6]

[2] ACES Beliefs: We believe that: each individual has inherent worth; all individuals can learn; high expectations and effort are essential for higher achievement; quality education provides the foundation for the success of the individual and the community; diversity strengthens an organization; individuals are accountable for their actions; everyone has a responsibility to each other and to contribute to the common good; honesty and respect are essential for building trusting relationships; a positive attitude enhances performance; collaboration enhances productivity and generates creativity; families are essential partners in education; and the willingness to change is necessary for individuals to grow and organizations to thrive.

[3] ACES Mission: The mission of ACES, a leader and innovator in education, is to empower our students, member districts, and other clients to meet educational and life challenges in the changing global environment by providing collaborative, customized, cost effective solutions to meet identified needs of our educational community.

[4] ACES Objectives: To have 100% of ACES students achieve identified goals and/or proficiency in standardized educational measurements by 2012; To assist all of our member districts in identifying and achieving their educational goals; to increase our capability for developing customized innovations based on identified client needs; and to have 100% of all ACES schools and programs fiscally sound by 2012.

[5] ACES Strategic Parameters: We will always provide safe and orderly learning environments. No new program or service will be added unless it is consistent with the ACES Strategic Plan, benefits justify costs, and provisions are made for the allocation of resources, professional development, and program evaluation. No program or service will be continued unless it contributes to the ACES Mission and its benefits justify its cost. Site based plans will always be consistent with the ACES Mission. All curriculum and instruction will be designed to maximize student achievement. We will always expect our employees to act in a responsible and professional manner. We will always honor our RESC Alliance agreements. We will always consider current research and best practice in making program decisions. We will always strive to balance the success of the organization with the wellness of the individual. We will always offer educational programs that provide quality direct services for children, youth, and adults.

[6] ACES Strategic Objectives (Strategic Plan 2012-2017): Objective 1: To have all ACES learners demonstrate continuous growth educationally, socially and emotionally through identified goals and rigorous standards utilizing multiple measure of assessment. Objective 2: Leader Advocate Innovator: To be a leader, advocate, innovator and

ACES Technology Vision Statement

A technology vision statement expresses thoughts about what the LEA's future technology-rich educational environment will look like. It should be written in broad terms and guide the development of the technology plan (CSDE, 2012, p. 9).

ACES Technology Vision Statement

All students' learning will be enhanced through equitable access to a wide range of information and technology resources. ACES learners will use technology to function effectively as citizens, workers, consumers, and life-long learners in today's competitive, global, knowledge-based society. It is ACES goal to effectively seek out and incorporate innovative technology in all schools, programs, and member districts. We will continue to serve as a model for technology integration through research and successful implementation. By engaging in a process of continuous improvement, all members of the ACES educational community will have the tools to maximize teaching and learning, therefore, allowing them to obtain their highest possible level of achievement.

ACES ITL Curriculum Philosophy

All learners must become fluent users of resources, technology, and tools to...

- Inquire, think critically, be creative, and gain knowledge;
- Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge;
- Share knowledge and participate ethically and productively as members of our global society; and
- Pursue personal and aesthetic growth as a lifelong learner.

visionary in collaborating with school districts and communities to transform education in the 21st Century. Objective 3: High-Quality Programs: To sustain the existence of fiscally healthy and high-quality ACES programs, schools and services.

ACES Needs Assessment Environmental Scan

This needs assessment examines external and internal factors affecting ACES current technology status. External factors are presented using the STEEP framework of socio-cultural, technological, economic, environmental, and political factors. Internal factors are presented using the ISTE (2015) 14 Essential Conditions listed below.

ACES Internal Technology Committee (AITC) presents the needs assessment based on environmental scanning categories for external factors and ISTE's (2015, para. 1) 14 Essential Conditions for internal factors:

- External STEEP Factors: Sociocultural; technological; economic; environmental; and political.
- Internal Factors – 14 Essential Conditions (ISTE, 2015): (1) Shared vision; (2) empowered leaders; (3) implementation planning; (4) consistent and adequate funding; (5) equitable access; (6) skilled personnel; (7) ongoing professional learning; (8) technical support; (9) curriculum framework; (10) student-centered learning; (11) assessment and evaluation; (12) engaged communities; (13) support policies; and (14) supportive external context.
- Internal framework: The committee presents the responses in three sections:
  1. Current State: The current state reported using guiding questions.
  2. Essential Conditions Score: Resulting rubric scores from guiding questions and stakeholder survey results.
  3. Suggestions for Future Work: Analysis of strengths and weaknesses to guide building our future action plans arranged by the National Technology Plan and CSDE Technology Plan goals.

Needs Assessment Environmental Scan: Status of Past Themes

Status of Past Themes - An initial step of the needs assessment was to examine the status of past themes.

ACES 2012-2015 Educational ICT Plan Status on Past Themes In addition to continuous support of technology integration through the six national and CSDE goals, the following themes emerged from our 2012-2015 technology planning process.	
Past Themes	**Status**
One-to-one laptop initiative	For the past ten years, ACES has had one-to-one laptops for students in Grades 6-8. Throughout the past three years, ACES has researched reallocation of equipment, newer equipment options (e.g., iPads, Chromebooks), examined budget requirements, and applied for grants to move towards one-to-one laptop status for K-12 students. The fiscal year 2015-2016 budget and current CSDE grant opportunities allow ACES to achieve this theme for students.
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ACES 2012-2015 Educational ICT Plan Status on Past Themes	
In addition to continuous support of technology integration through the six national and CSDE goals, the following themes emerged from our 2012-2015 technology planning process.	
Past Themes	**Status**
observation tools	BloomBoard software to assist educators in gathering evidence for evaluation and observations.

Needs Assessment Environmental Scan: External Factors

External Factors

When evaluating needs, the STEEP framework was used to search literature on emerging trends at multiple systems levels: locally; nationally; and globally. STEEP includes sociocultural, technological, economic, environmental, and political factors. Trends are examined at the micro task environment (e.g., governments, community, customers, suppliers, shareholders, employees, competitors, and trade associations) and the trend ecosystem continuum (e.g., things >> happenings - signs of change >> trends >> drivers - move trends).

2015 External Factors and Emerging Trends[7]

Trending Up	**Neutral**	**Trending Down**
Adaptive learning	Accountability	Mass education publishers
Digital citizenship	Differentiation	Data teams
Digital media	Computer coding	Scripted curricula
Libraries as digital commons	Pure creativity	Draconian district filters
Depth of content	Massive in-person education conferences	Coverage of content
Personalized and self-directed learning with badges	Colleges in general	"21st century learning" as a phrase or single idea
Flipped learning, flipped classroom, blended learning	Experiential learning	The perceived quality of teacher certification & training programs
Teacher self-directed PD	The physical design of most school buildings and universities	College as the standard
Collaborative learning, communities of practice, and evidence-based practices	Gamification-as-grading-system	The traditional classroom
Digital literacy	Tutoring	Whole class processes
Design thinking	Cloud-based learning	Flash drives, hard drives, CDs, emailing files
Mindfulness, meditation	Librarian/DMS as bibliophile	Alternative schools/classrooms for special needs students
Teacher as guide-on-the-side	Online encyclopedias	Apple-centric thinking
Gamification of content	Apps like Prezi	
	Socioeconomic disparity	
	iCloud	
	MOOCs	

[7] ASCD, 2015; CAPSS, 2015; ISTE, 2015; Learning Forward, 2015; SpeakUp, 2015; Teach Thought, 2015; UNESCO, 2015

Trending Up	Neutral	Trending Down
Genius hour, maker spaces, collaboration time		Cable television, subscription-based content streaming
Cloud-based software and storage (MS OneDrive, Google)		Apps like PowerPoint
Platform agnosticism		Oversimplifying BYOD thinking
1:1 tablets/devices with BYOD		"Doing projects"
Project-based learning		Dropbox

Top Trends' Definitions

Flipped learning

"Flipped learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter" (Flipped Learning Network, 2014, para. 1; Bergmann & Sams, 2012). The four pillars of flipped learning are (1) flexible environment, (2) learning culture, (3) intentional content, and (4) professional educator.

Flipped classroom

"Flipping a class can, but does not necessarily, lead to flipped learning. Many teachers may already flip their classes by having students read text outside of class, watch supplemental videos, or solve additional problems. But to engage in flipped learning, teachers must incorporate the four pillars into practice" (Flipped Learning Network, 2014, para. 2).

Blended learning (hybrid learning)

Blended learning goes beyond technology-rich and one-to-one instruction. It involves leveraging the Internet to afford each student a more personalized learning experience, meaning increased student control over time, place, path, and/or pace of his learning (Christensen, 2012, para. 1). The definition of blended learning is a formal education program in which a student learns: (1) at least in part through online learning, with some element of student control over time, place, path, and/or pace; (2) at least in part in a supervised brick-and-mortar location away from home; and (3) the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience (paras. 2-5). The model may include multiple formats (e.g., rotation, flex, a la carte, or enriched virtual) (para. 6) and takes advantage of either school provided (e.g., one-to-one program) or student provided technologies (e.g., BYOD).

Personalized learning (self-directed learning, student-centered learning or learner-centered learning)

"A personalized learning system transforms schooling by providing voice and choice on what, where, and how students learn in relation to competency-based, world-class knowledge and skills. In this personalized learning system" (CAPSS, 2015, p. 5):

• Every student works closely with teachers to establish the goals and pace of learning, pursues investigations or projects to demonstrate goals, regularly evaluates progress in relation to those goals, and communicates results as an indication of mastery.

• Every teacher creates a classroom culture of respect grounded in high expectations as well as provides feedback and guidance in learning content, developing skills, and thinking strategically.

• Every learning community both within and outside of school offers students the opportunity to learn from experience through application of authentic situations.

Information and Communication Technologies (ICT) - Digital citizenship, digital badges, competencies, and certificates

Digital citizenship is defined as the norms of acceptable, appropriate, and responsible behavior while using technology. Watters (2015) selected this as a trend for the fourth year in a row for *Technology and Learning Publication*. Digital citizenship was highlighted as a critical ICT competency (UNESCO, 2014).

Student data privacy, CIPA, COPPA, and FERPA

USDE (2015) provides new guidance on protecting student privacy while using online educational services and applications through the federal Children's Internet Protection Act (CIPA), Children's Online Privacy and Protection Act (COPPA), and Family Educational Rights and Privacy Act (FERPA).

MOOCs, OER, individual, and collective learning

Massive open online courses (MOOC) and open education resources (OER) are digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning, and research (e.g., iTunes University, Ted Ed, Coursera, Lynda.com, Udemy, www.merlot.org, unconference.net). Self-directed professional development was highlighted as a trend by SpeakUp for the past two years (Evans, 2014). Crow's (2015) research found that both individual and collective learning was needed to reach depth of knowledge.

Makers' space, robots, 3D printers, Indie web movement, and curators

In a history of educational robots, Watters (2015) describes the engagement of robots, programming, coding, making, and learning. The curator movement encourages people to become creators not simply consumers of web technologies and in the process to think more carefully about what happens to their digital creations and to their digital public spaces, e.g., what happens to our content, what happens to our data.

Learning and the brain – Universal design for learning (UDL) and design thinking

Neuroscience, mindfulness, and emotional intelligence were noted as important and necessary balancing capabilities in today's fast-paced world. Universal design for learning uses three major brain networks to link the *what of learning* (recognition network), the *how of learning* (strategic network), and the *why of learning* (affective network) (UDL, 2015).

Communities of practice, learning communities, professional learning communities (PLC), and professional learning networks (PLN) supporting evidence-based practices

Organizational learning and innovation diffusion are supported by a continuum of communities of practice, from less structured learning communities to formal PLC and broader PLN. Seen as a communication channel in decentralized school systems, PLC support learning, experimenting, and innovating as critical follow-up to professional development.

External & Internal Factors Opportunities and Emerging Themes Grid	
Responses - Opportunities	**Responses - Threats**
✓ BYOD ready – but need buy-in and awareness by staff and administration (AITC). ✓ One-to-one for K-12 students planned for 2015-2016 (AITC) ✓ Learning Management System (LMS) to support blended and personalized learning, flipped classrooms, and self-directedness (AITC) ✓ Diffusion and ongoing implementation processes – find and build 'champions' for each project (AITC) ✓ Digital citizenship – programs and resources already available for delivery to staff and students (AITC) ✓ Digital literacy - programs and resources already available for delivery to staff and students – need time and champions at each location (AITC)	× BYOD – need awareness and PD (AITC) × One-to-one sustained budget, training for staff new to one-to-one, lack of adoption, and additional support (AITC) × Missing one-to-one for all staff (AITC) × Lacking communication channels to build awareness – digital citizenship (AITC) × Self-directed learning – staff need help getting started (e.g., course on Lynda.com and time together) (AITC) × Need to balance personal and social learning (AITC) × Learners – includes students, educators, and staff – all learners need to be considered when rolling out software (AITC) × Champions – need to create budget proposal for coaches or stipend positions (AITC) × Makers' spaces, library as digital commons – needs investigation (AITC) × Project-based learning at awareness level (AITC) × Digital citizenship, accountability, and student data privacy (AITC) × Perceived downward trend of alternative schools and classrooms for special needs students – may be an advocacy issue (AITC)

Needs Assessment Environmental Scan: Internal Factors

Internal Factors

When evaluating needs, AITC used the ISTE 14 Essential Conditions framework (ISTE, 2015): (1) Shared vision - new; (2) empowered leaders - new; (3) implementation planning - new; (4) consistent and adequate funding; (5) equitable access; (6) skilled personnel - new; (7) ongoing professional learning; (8) technical support; (9) curriculum framework; (10) student-centered learning; (11) assessment and evaluation; (12) engaged communities; (13) support policies; and (14) supportive external context.

Essential Condition – Shared Vision (ISTE, 2015a)

Shared vision is defined as "proactive leadership in developing a shared vision for educational technology among all education stakeholders, including teachers and support staff, school and district administrators, teacher educators, students, parents, and the community" (ISTE, 2015a, para. 1).

- Shared vision arises from the collaborative voices, goals and values of the educators, support staff, students, parents, and community members within the system (define system-wide vision)
- Identify all stakeholders (stakeholders)
- Create a plan for communicating with stakeholders about the vision (communicate plan)
- Allow stakeholders to provide input about the vision and plan (input)
- Processes in place to identify and respond to emerging themes in technology integration (e.g., one-to-one, BYOD, cloud computing, online curriculum resources, programming, robotics, makers' movement, personalization, content management system, learning management system) (Emerging themes technology integration)
- Processes in place to identify and respond to emerging themes in curriculum delivery through technology to meet all learner needs (students and adults): blended learning versus personalized learning versus individualized learning versus differentiated learning (emerging themes curriculum delivery)
- Processes in place to transform into a high-performance system driven by the digital-age learning needs of all learners (systems thinking)

ACES Shared Vision Rubric of Success Indicators					
Essential Categories	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
System-wide vision		1 AITC			2
Stakeholder involvement		1 AITC			2
Communicating vision		1 AITC			2

ACES Shared Vision Rubric of Success Indicators					
Essential Categories	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Emerging themes technology integration			4 Focus Groups 1 AITC	4 Focus Groups	3
Emerging themes curriculum delivery		1 Focus Group	6 Focus Groups 1 AITC	1 Focus Group	3
Systems thinking		4 Focus Groups 1 AITC	4 Focus Groups		2

ACES Shared Vision Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Stakeholders believe the vision (AITC) ✓ Newly hired curriculum coordinators support emerging curriculum delivery (AITC; 2 focus groups) ✓ Newly created technology teacher for Mill Road and North will support integration of technology and teacher literacy (AITC) ✓ Using the Speak Up Surveys gave stakeholders a voice in the technology planning process (AITC) ✓ Continuous examining of emerging trends – but needs to be done more formally (AITC) ✓ Examples: Hour of Code, Scratch programming (2 focus group) ✓ Curriculum coordinators boosted these areas (focus group) ✓ From the Speak-Up Survey results: Overall, students are overwhelming supportive and knowledgeable of new and emerging technologies (AITC) ✓ From the Speak-Up Survey results: Evidence provides guidance for developing action plans; recommend the survey be administered and reviewed annually (AITC)	× Not sure the voices of all stakeholders are represented in the current ACES strategic plan (AITC) × Need a better communication channel for diffusing information – systemic issue (AITC) × Missing collaborative projects and grants that pull together different districts and schools (AITC) × Getting adaptive technology assessment - school approves it and does not get it going for the whole year (focus group) × Monthly technology meetings with districts - but information is not disseminated at the school level (focus group) × Before being a curriculum coordinator, did not know about AITC or building one-to-one technology meetings (focus group) × I was aware, so it is not consistently disseminated to the teacher level (focus group) × From the Speak-up Survey results: Difference of opinion in parents and students in awareness of research on the value of educational gaming and use of social media tools, therefore communication of research may need to be disseminated (AITC) × Do all stakeholders have the same survey? No questions are geared to age and audience (AITC)

Essential Condition – Empowered Leaders (ISTE, 2015b New)

Empowered leaders are defined as "stakeholders at every level empowered to be leaders in effecting consistent system-wide change" (ISTE, 2015b, para. 1).

- Leaders at all levels are empowered to experiment, make decisions, take risks, and adjust their course (e.g., teachers, staff, teams, PLC) (distributed leadership)
- Empowered stakeholders at all levels create a system of proactive leaders who are able to make critical decisions about their own learning and teaching, help each other solve problems, and enact change within and across their own spheres of influence (empowered)
- Teachers and stakeholders have the opportunity to provide input on policies and are able to address issues in a supportive environment (policy input)

ACES Empowered Leaders Vision Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Distributed leadership			1 AITC		3
Empowered			1 AITC		3
Policy input			1 AITC		3

ACES Empowered Leaders Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ From the Speak-Up Survey results: When responding to challenges facing schools by school administrators versus district administrators, there is agreement in the top two categories, i.e., closing the achievement gap and staff morale and motivation (AITC)	× From the Speak-Up Survey results: When responding to challenges facing schools by school administrators versus district administrators, there is a gap in the adequate funding, use of technology, and students' behavior and attendance issues (AITC)
✓ From the Speak-Up Survey results: When responding to popular approaches implemented with positive results, overall agreement between survey respondents and external emerging themes (e.g., blended learning, personalized learning) (AITC)	× From the Speak-Up Survey results: The district's readiness and capacity question highlighted an issue with replicating or scaling initiatives within the district as well as an issue with community involvement (AITC)
✓ From the Speak-Up survey results: Technology leaders are aware of emerging trends being implemented at ACES (AITC)	
✓ From the Speak-Up survey results: The district's readiness and capacity for implementation of a new digital learning initiative – had agreement that important categories are adequately funded for startup and ongoing support, adequate technology infrastructure, teacher buy in, professional development for administrators, and	

ACES Empowered Leaders Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
teachers' knowledge on how to integrate technology within instruction (AITC) ✓ Technology savvy teachers and staff bringing forward new ideas to learning communities (e.g., AITC, AT Team meetings) (AITC)	

Essential Condition – Implementation Planning (ISTE, 2015c New)

Implementation planning is defined as "a systematic plan with a shared vision for school effectiveness and student learning through the infusion of information and communication technology (ICT) and digital learning resources" (ISTE, 2015c, para. 1).

- Includes short-term and long-term goals (goals)
- Detailed roadmap for how goals will be accomplished (roadmap)
- Important milestones and timelines (milestones)
- Division of responsibilities and resources, including human, financial, and time (responsibilities and resources)

ACES Implementation Planning Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Goals			1 AITC		3
Roadmap			1 AITC		3
Milestones			1 AITC		3
Responsibilities and resources		1 AITC			2

ACES Implementation Planning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Strengths include having a plan, goals, roadmaps, and milestones – a process in place (AITC)	× While ACES has strong processes in place for goals, roadmaps, and milestones, the communication of these goals and milestones needs improvement (AITC) × Lack of technology available to all staff may hinder staff in knowing about implementation of technology projects (AITC)

Essential Condition – Consistent and Adequate Funding (ISTE, 2015d)

Consistent and adequate funding is defined as "ongoing funding to support technology infrastructure, personnel, digital resources, and staff development" (ISTE, 2015d, para. 1).

- Develop a strategic plan for acquiring funding (acquire funds)
- Include ongoing maintenance, updates, system support, and professional development (sustainability)
- Address the full cost of technology as a regular part of district/school budgeting (TCO)

ACES Consistent and Adequate Funding Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Acquire funds		1 Focus Group	2 Focus Groups 1 AITC	4 Focus Groups	4
Sustainability		1 Focus Group 1 AITC	2 Focus Groups	4 Focus Groups	4
TCO		1 Focus Group	2 Focus Groups	4 Focus Groups 1 AITC	4

ACES Consistent and Adequate Funding Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Equipment refreshed every three years – for the past 10 years (AITC) ✓ One-to-one for 10 years (AITC) ✓ All certified staff having laptops (AITC) ✓ Adequate technology support staff in the buildings (AITC) ✓ Help desk support (AITC) ✓ Annual examination of software, hardware, and policies (AITC)	× Not sure; who pays for it? (focus group) × What is the full-cost? (focus group) × Are there things they did not get because of funding? For example, iPads in K-1 did not involve curriculum coordinators (focus group) × Not aware (focus group) × Sometimes we miss things or an initiative might require more resources than planned (focus group) × Needs to be split out of operations to account for separate programs within one building (focus group) × Needs more transparency (focus group)

Essential Condition – Equitable Access (ISTE, 2015e)

Equitable access is defined as "robust and reliable access to current and emerging technologies and digital resources, with connectivity for all students, including those with special needs, teachers, staff, and school leaders" (ISTE, 2015e, para. 1).

- Educators are prepared to guide students as they deal with the social, ethical, and legal issues related to life in a technological world. Ensure individuals know how to access the technology (educators knowledge of digital citizenship)

- Outline where to go for help getting access (get help)
- Be flexible enough to accommodate diverse learners and instructional needs (accommodate diverse learners' needs)
- Socioeconomic status, gender, race, and special needs are not barriers in schools to readiness for the digital age (barriers)
- Students have access to the Internet outside of school (Internet outside of school)
- ACES teachers and staff persons are familiar with assistive technologies (AT) and universal design for learning (UDL)

ACES Equitable Access Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Educators knowledge of digital citizenship	3 Focus Groups	2 Focus Groups 1 AITC	2 Focus Groups	1 Focus Group	1
Get help	3 Focus Groups 1 AITC	2 Focus Groups	2 Focus Groups	1 Focus Group	1
Accommodate diverse learners' needs	3 Focus Groups	2 Focus Groups	2 Focus Groups 1 AITC	1 Focus Group	1
Barriers	1 Focus Group	3 Focus Groups	1 Focus Group 1 AITC	3 Focus Groups	3
Internet outside of school		2 Focus Groups	4 Focus Groups 1 AITC		3
UDL and AT		6 Focus Groups 1 AITC	2 Focus Groups		2

ACES Equitable Access Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Middle school is more aware than younger students [because teachers at that level] focus more on safety (focus group) ✓ AUP (focus group) ✓ Digital awareness (focus group) ✓ Themes - responsible use – continuous (focus group) ✓ Social media - teachers held to a code of ethics (focus group) ✓ Second Steps deals with that as well (focus group) Think this should be digital citizenship, not Second Step (AITC)	× Middle school students test the waters (AITC) × There is a whole etiquette around technology - need to work on that (focus group) × Depends on what our students are able to understand and their age (focus group) × Too much emphasis on blocking access instead of education (focus group) × Teachers do not think it is part of their job - do we talk about it or take time out of the content time (focus group)

ACES Equitable Access Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Just look at laptops - we provide everyone with technology - in school different from outside of school (focus group)	× All ACES staff do not have equitable access to technology – what about one-to-one for staff (AITC)
✓ Some use the data plan on their cell phones (focus group)	× Not enough training in knowing social and ethical issues (e.g., cyberbullying) (focus group)
✓ If teachers are told someone is misusing technology they go to the administration (focus group)	× What are my obligations? Lots of legalities (focus group)
✓ We make sure everyone has what they need here, for example, we have homes with no Internet - we help parents know about special programs (focus group)	× Teachers don't know - e.g., mandatory reporters have annual training (focus group) Good discussion item for building-level staff meetings (AITC).
✓ 2015-2016 school year, initiative for one-to-one for all students K-12 (AITC)	× Maybe need some type of refresher or ongoing training (focus group)
✓ Special education teachers would know, but not everybody (focus group)	× Putting a poster in a classroom is not enough (focus group)
✓ Does not affect us as teachers - because we look at everyone the same (focus group)	× Too busy doing other things see things posted on interfaces (focus group)
✓ Different in what our students come to us with (focus group)	× Need more with younger students (focus group)
✓ Not always cognizant of their needs at home (focus group)	× Need more outreach (focus group)
✓ Their computers are their cell phone (focus group)	× More proactive strategies (focus group)
✓ Come with different barriers (focus group)	× Even with the filter, things still pop up (focus group)
✓ Most do - they are on social media - phones mostly (focus group)	× Need parent piece (including filters) (focus group)
✓ Will use phone or library (focus group)	× Everything changes so fast - guidance on one thing and then something new comes up (focus group)
✓ We have no bearing on whether they do or don't. Example, there are programs through ISP to have free or low cost access. LMS used to continue learning at home on snow days. UDL - emerging; AT – ongoing (focus group)	× Depends on the building (focus group)
✓ Not a barrier here at ACES (focus group)	× We are only aware if one of your students has a need (focus group)
✓ At ACES, we give our students equal opportunity and constantly look at (focus group)	× Hard to assess what families have at home cell phone internet access is not equal to device access (focus group)
✓ Once they come to NORTH - we give every child a chance here (focus group)	× Barriers question vague - there are barriers in life but not in school (focus group)
	× Some sending schools do not let students use technology (focus group)
	× Magnet school education of UDL needs to increase [to] the level of our special needs schools (focus group)
	× Internet access: Some, but we don't know (focus group)

ACES Equitable Access Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
	× ACES teachers and staff persons are not consistently familiar with assistive technologies available in district or externally (AT) (AITC)

Essential Condition – Skilled Personnel (ISTE, 2015f New)

Skilled personnel is defined as "educators, support staff and other leaders skilled in the selection and effective use of appropriate ICT resources" (ISTE, 2015f, para. 1).

- Staff model what it means to be a digital age professional (model digital age)
- Use digital tools to increase productivity and enhance learning (use digital tools)
- Keep skills current (keep current)
- Hiring practices and policies that reflect the significance of technology skills (hiring and evaluation practices)

ACES Skilled Personnel Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Model digital age professional			1 AITC		3
Use digital tools			1 AITC		3
Keep current		1 AITC			2
Hiring and evaluation practices			1 AITC		3

ACES Skilled Personnel Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Interfaces has been used more collaboratively than ever this past year (e.g., OneNote) (AITC) ✓ Use of Google Apps for Education keeps us proficient in digital age tools and collaboration (AITC) ✓ After attending ISTE Conference for multiple years, ACES is supportive of sending educators to attend and stay up-to-date (AITC) ✓ Technology coordinators at the building level (AITC)	× While technology leadership (AITC) may be aware of digital age tools and proficiencies, that information is not always conveyed to staff (AITC) × Other staff are not always available for workshops (e.g., TAD and support staff) (AITC) × Sharing knowledge of technology among tech savvy educators does not happen with any regularity (AITC)

ACES Skilled Personnel Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Use of online technology-related professional workshops available through Lynda.com (AITC)	

Essential Condition – Ongoing Professional Learning (ISTE, 2015g)

Ongoing professional learning is defined as "technology-related professional learning plans and opportunities with dedicated time to practice and share ideas" (ISTE, 2015g, para. 1).

- Educators understand the span of skills and processes that students need to succeed in the digital age (cultivate digital age skills)
- Educators are prepared to use a variety of technology-supported strategies for teaching and learning to meet the needs of students (professional practice)
- Educators are prepared to use technology to increase professional productivity and gain enriched access to professional resources (productivity)
- Provide follow-up support and professional development for technology initiatives (PD follow-up)
- Assess the technology professional development needs of teachers, administrators, and non-certified staff (Assess PD needs)
- Provide comprehensive professional growth opportunities for teachers, administrators, and other staff that builds the capacity to advance their vision (PD opportunities)

ACES Ongoing Professional Learning Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Cultivate digital age skills	1 Focus Group	3 Focus Groups	3 Focus Groups 1 AITC	1 Focus Group	3
Professional practice		3 Focus Groups	3 Focus Groups 1 AITC	2 Focus Groups	3
Productivity		2 Focus Groups	5 Focus Groups 1 AITC	1 Focus Group	3
PD follow-up		1 Focus Group 1 AITC	3 Focus Groups	4 Focus Groups	4
Assess PD needs	1 Focus Group	3 Focus Groups 1 AITC	1 Focus Group		2
PD opportunities	2 Focus Groups	4 Focus Groups 1 AITC	1 Focus Group	1 Focus Group	2

ACES Ongoing Professional Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ We believe all understand the span of skills (focus group) ✓ Thanks to Technology Coordinators and Director of ET (2 focus groups) ✓ Our staff (WHEW) do because of the students they work with (focus group) ✓ New apps all the time (like those listed in Canvas) (focus group)	× We believe all understand the span of skills but do not necessarily know how to expand their practices (focus group) × Not sure if administrators value technology, whether one-to-one or not (focus group) × Do administrators embrace it? Systemic issue (focus group)

ACES Ongoing Professional Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Training for teachers is there, but it is not enough (focus group) ✓ Through the technology lens - more differentiated (focus group) ✓ Lots out there - but common employee may not know about it (focus group) ✓ Some - recycling, batteries, email communication to go paperless (focus group) ✓ Putting the Explorer online was a big jump; or the old daily bulletin (focus group) ✓ Feel like we are leaps and bounds beyond other districts (focus group) ✓ From the Speak Up Survey results: Teachers are engaged in seeking their own professional development opportunities in addition to what ACES may provide (AITC) ✓ Teachers are using a variety of digital tools outside of the school day for their personal growth (AITC) ✓ March 27th, 2015 PD Day offered a variety of workshops plus 'Design It Yourself' options for educators (AITC) ✓ 2015 online technology-related professional development available through Lynda.com for all staff and students (AITC) ✓ Educators understand data better this year after rolling-out resources like iReady (AITC)	× When people like Director of ET go to building, teachers may not be fully present (focus group) × Distracted when they go to workshops (focus group) × We almost always [are at] pre-aware [level] because technology changes so fast (focus group) × What about - what do the kids understand about the skills for digital age? They think they know the correct way; may not know all that; for example, just looking at Power Points and not understanding presentations (focus group) × Some hold back on the contemporary area (e.g., money versus e-versions of $). Understanding of money before swiping a card; need both; moving towards that (focus group) × Constantly changing; difficult (focus group) × Would require constant PD and time (focus group) × Lack of knowing where to find the technology curriculum (focus group) × Special education schools do not have the 8th grade assessment requirement, therefore teachers are not as aware of tools like Edvation's TechSteps that could be used and helpful for their students as well as their own professional growth (AITC) × Maybe when it rolled out - teachers were not made aware of it (focus group) × Challenge for teachers is seeing how technology is aligned to support their curriculum (focus group) × Need help in understanding technology as a tool to support the curriculum (focus group) × Hard to know what is valuable versus fad (focus group)? × Training for teachers is there, but it is not enough (focus group) × Inconsistent (focus group) × Whose vision (focus group)? × Where does this fit into the ACES 3-5 year plan (focus group) × Whether new to district or current, may not be able to articulate the vision (focus group)

ACES Ongoing Professional Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
	× We need to offer our teacher assistants more PD on technology (focus group) × Maybe we need to pull them (TAs) out of the classroom (focus group) × More part of the process -- needs to be getting things fixed and getting things rolling (focus group) × Need to close gap in PD offered to non-certified staff (focus group) × Speaking as teacher - so many state mandated things seem to drive PD, but in our area it is a stretch to make connections (focus group) × Frustration is our own PD unit does not offer PD for the students we serve (focus group) × We don't have anything that rates the proficiency (focus group) × Just look at iReady - forgot to give the teacher toolbox ahead of time (focus group) × Sometimes do things backwards (focus group) × Training on how to read the information and data (focus group) × Awareness it is important - not enough 'stuff' to implement the technology (focus group) × Their vision - change as the vision changes (focus group) × Need to continue the PD (focus group) × Some will take a few years to implement (focus group) × Struggles -- need more time, then we are on to something else (3 focus groups) × Need more time - like Career Cruising - I should be a master (focus group) × I don't have time to use often enough (focus group) × Need training for a whole day - instead get Webinars (focus group) × Face-to-face would make a huge difference (focus group) × 'Variety' - use what is being required of use - not a variety of strategies (focus group) × Usually quick crash course (focus group) × Not enough Smart Board training and time to follow-up (focus group)

ACES Ongoing Professional Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
	× Personal professional growth - surprised no tuition reimbursement (focus group) × Lots out there - but common employee may not know about it (focus group) × Don't know about it (focus group) × Some [districts] have moved beyond ACES (focus group) × How comprehensive is it - if someone can only go to a few sessions (focus group) × Lots of times does not have anything to do with special education - Curriculum Consortium (focus group) × We do [have] a general 'need' for PD, not specifically technology (focus group) × Technology coordinators bring things to our attention before we even know we need it (focus group) × Sometimes we get things and we don't know what we need until we get into it (focus group) × Teachers are not shy about asking (focus group) × Too many examples. We accomplish 4 of 8. Are all appropriate for ACES? (focus group)

Essential Condition – Technical Support (ISTE, 2015h)

Technical support is defined as "consistent and reliable assistance for maintaining, renewing and using ICT and digital learning resources" (ISTE, 2015h, para. 1).

- All schools have access to a range of high-quality technology uses within the curriculum, regardless of the school or classroom they attend (high-quality tech)
- Students have adequate time to use technology (student time)
- All staff persons have adequate access and time to use technology (staff time)
- Technology is available before or after school (before and after school)
- BYOD is available for staff and students; BYOD readiness is decided at the school and classroom level (BYOD)
- The infrastructure provides appropriate, robust communication from every learning setting and extends beyond the school day and outside the school facility (infrastructure)
- Equipment and digital resources are strategically deployed and sufficient to meet the needs of learners and educators (e.g., servers, desktops, peripherals, software licensing) (deployment)
- ACES provides adequate and timely support for hardware, software, and instructional application (timely support)
- Technology is used strategically to improve administrative processes and operations (administrative processes)

- All schools participate in being an environmentally conscience agency through recycling paper and batteries, using energy settings, turning off equipment when not in use, unplugging chargers, printing in black-and-white versus color, using email to communicate, and going paperless (environmentally sound)

ACES Technical Support Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
High quality tech		3 Focus Groups	3 Focus Groups	1 Focus Group 1 AITC	2.5
Student time		2 Focus Groups	3 Focus Groups 1 AITC	1 Focus Group	3
Staff time		2 Focus Groups 1 AITC	3 Focus Groups	1 Focus Group	2.5
Before and after school	1 Focus Group	2 Focus Groups 1 AITC		4 Focus Groups	4
BYOD		5 Focus Groups 1 AITC		3 Focus Groups	2
Infrastructure	1 Focus Group	4 Focus Groups	3 Focus Groups 1 AITC		2.5
Deployment		3 Focus Groups	3 Focus Groups	2 Focus Groups 1 AITC	2.5
Timely Support		3 Focus Groups	2 Focus Groups	3 Focus Groups 1 AITC	4
Administrative processes		3 Focus Groups	2 Focus Groups	3 Focus Groups 1 AITC	4
Environment-ally sound		5 Focus Groups 1 AITC	2 Focus Groups	1 Focus Group	2

ACES Technical Support Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ BYOD still available and decided at the school level (focus group) ✓ We have 1-2-1 (focus group) ✓ Does it [BYOD] need to happen at 1-2-1? Yes, they bring in cell phones, Macs, different technology (focus group) ✓ We know the computers are there [for after school] but is there anyone [staff] there to help them (focus group) ✓ With the technology, one-to-one programs [are] at an advantage (focus group) ✓ Everybody has a technology budget and voice on AITC (focus group)	× It is open in other schools in the district (focus group) × Equity issue for kids that do not have devices (focus group) × Trying to figure out the equity piece (focus group) × Other buildings have full-time technology support (focus group) × Technology education support depends on class size (focus group) × TADs need more technology time outside (focus group)

ACES Technical Support Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Separate answers for students versus staff (focus group)	× Guest are having difficulties connecting (focus group)
✓ We have for staff/adults (focus group)	× Staff BYOD have trouble getting connected and inactivity logs you out (focus group)
✓ Improved over time; technology has changed dramatically over the years (focus group)	× Don't know (focus group)
✓ Sometimes ask technology coordinators to expedite (focus group)	× Different schools have different needs (focus group)
✓ We can always do better (focus group)	× Based on student needs (focus group)
✓ Help desk people are quick to respond - they want to fix things - they will spend whatever time it takes (focus group)	× We all have access, not sure about the high quality (focus group)
✓ Feel like we are a priority; when out of district people come in it is noticed (focus group)	× Need more time with their communication devices and iPads (focus group)
✓ Technology Services researches things for us (focus group)	× Hear from TADs that they do not have time to check email (focus group)
✓ They see that people are working on it and doing their best (focus group)	× Not sure staff are aware (focus group)
✓ Technology coordinators provide a lot of help, but I figure out a lot of things on my own at home (focus group)	× BYOD - not aware if that is happening in all the schools for students (focus group)
✓ Strategic use of things has to be driven by administrators (focus group)	× Hard to judge access and time (focus group)
✓ If we did not have this technology plan, we would not have as much as we have now; progress is great; IWB - cannot teach without it (focus group)	× System-wide is hard to tell (focus group)
✓ Some things are in place, but everyone may not know about it (focus group)	× We don't have the budget for after school (focus group)
✓ Automatic lights shut off (focus group)	× K-5 would be great to have before and after school (focus group)
✓ Efforts towards paperless using email; but - then people print them (focus group)	× BYOD does not always work right (focus group)
✓ Communication has gotten to a level were most email is paperless (versus memos) is a positive (focus group)	× Part of it is the connectivity; we are having a lot of problems with it (last two months issues) (focus group)
✓ Some things we do a great job recycling some they do not; printing and turning off needs work way too many printers (focus group)	× Not sure we have caught up (focus group)
✓ Continuous examination of existing technologies to meet administrative needs - report cards, one note, Google docs (focus group)	× Filter stops connectivity at home (focus group)
	× Filter is a problem for one-to-one (focus group)
	× Does extend - maybe the 'robust' is the issue (focus group)
	× The word "robust" might skew results (focus group)
	× There are certain rooms where the wireless works will and others that it does not (focus group)
	× Pearson at home is inconsistent (focus group)
	× Confusing prompt - connectivity big concern getting kicked off cant log on no logon servers long logon times (focus group)
	× Communicated to Technology Services the inconsistent connectivity issues (focus group)

ACES Technical Support Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
	× Teachers have given up on help desk requests because it is so often (focus group) × Building specific (focus group) × We cannot take connectivity for granted in our district (focus group) × Labs do not cut it - especially for real-time (focus group) × CALFs/COWs are inconsistent - sometimes not charged, not shut down correctly - eats up a lot of academic time getting them ready (focus group) × Concept of assessments, inability to have a 1-2-1 environment and do assessments (focus group) × Hard to blog about a book or have ongoing conversations (focus group) × Not going to be great if students do not have access to it in the classroom (e.g., Canvas) (focus group) × Previously thought of [ACES schools] as the ugly step sister (focus group) × Hard to use technology to the fullest when ten students or more in a class and two computers in the classroom (focus group) × Time crunch training then no time to use right away (focus group) × When I have a problem - it stumps the technology support people (focus group) × Timely support is needed (focus group) × Takes too long (focus group) × I have open tickets all time (focus group) × Sometimes they close a ticket - without communicating (focus group) × Tends to be problems (focus group) × Missing printer for 6 months. Now not using it with them - if they cannot print what do I do? (focus group) × They cannot email (focus group) × Flash drives are not working - the kids are not gentle (focus group) × We are missing having a media specialists (focus group)

ACES Technical Support Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
	× Career research. The kids little Netbooks are horrible - cannot logon - server is slow - server won't let people on - frustrating (focus group) × Cow carts are not efficient (focus group) × Struggle with connectivity (focus group) × It not that it is ignored - it is complex to resolve (focus group) × Two different technology [support staff] people with no connection [between them] (focus group) × So much on the website, it is hard to find things (SharePoint) (focus group) × Have to get used to finding things (focus group) × BloomBoard almost never works (focus group) × Food systems, power school, - may not work perfectly, but it is there (focus group) × Look at the whole system – provided (focus group) × Gets back to instructional leaders embracing it and using it (focus group) × Recycling [bins] are dumped all in one garbage (3 focus groups) × Some people are better than others regarding printing check sheet and daily reporting on paper (focus group) × No Effort - walk into any lab at the end of the day to see paper usage (focus group) × i-Ready toolbox - they print it out to give it to the students (focus group) × The only time we received reminders to turn off equipment was just before a long vacation (focus group) × Funding issue – if labs were staffed after school students would take advantage of it – even in the one-to-one schools (AITC)

Essential Condition – Curriculum Framework (ISTE, 2015i)

Curriculum framework is defined as "content standards and related digital curriculum resources that are aligned with and support digital age learning and work" (ISTE, 2015i, para. 1).

- School and classroom cultures of technology integration engage and motivate students, honor individual differences, support innovation, and endeavor to meet the learning needs of all students (culture)

- Students use technology beyond basic skills, such as, assistive and instructional (beyond basics)
- Teachers integrate technology into their lessons -- including individual student work, small group instruction, and entire class instruction (teachers integrate technology)
- Technology use is based on both high-impact, research-based practice and field-based best practices that are shown to add value to learning (research based)
- Student standards reflect digital-age proficiencies (standards)

ACES Curriculum Framework Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (No Effort) 1**	**Awareness (Starting) 2**	**Emergent (Getting There) 3**	**Maintenance (Ongoing) 4**	**Mode Score**
Culture		1 Focus Group 1 AITC	5 Focus Groups	1 Focus Group	3
Beyond basics		2 Focus Groups 1 AITC	4 Focus Groups	2 Focus Groups	3
Teachers integrate technology		1 AITC	4 Focus Groups	4 Focus Groups	3.5
Research based	1 Focus Group	1 Focus Group	5 Focus Groups 1 AITC	1 Focus Group	3
Standards	2 Focus Groups	3 Focus Groups 1 AITC	2 Focus Groups	1 Focus Group	2

ACES Curriculum Framework Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Teachers integrate technology into their lessons as the norm (focus groups) ✓ IWB and laptops unify the instruction (focus groups; AITC) ✓ Come along way - leaps and bounds (focus groups) ✓ Took a class and was surprised at what other schools were doing (focus groups) ✓ Now able to differentiate (focus group; AITC) ✓ If everyone had a device, you cannot tell that one student is working behind or on different (focus group; AITC) – e.g., IXL, Lexia ✓ Do use during earned activity time - or earned time (focus group) ✓ Building based; see us as more aware (focus group) ✓ Curriculum integration is supported through connectivity (AITC)	× Hard one; [technology is] not yet integrated - more an activity that goes along with it (focus groups; AITC) × Just starting (focus groups) × Connectivity is a handicap (focus group) × Staff do not have enough training in using the programs (focus group; AITC) × Sometimes there is too much technology and kids get overwhelmed and cannot focus (focus group) × Have to make sure the technology was working - causes frustration; Internet has been super slow - use the desktops right away - lose hours; Start moving backwards - no time to mess around - difficult (3 focus groups) × Worry that there are SPED students that could use assistive technology but may not be used (focus group)

ACES Curriculum Framework Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ They are pretty fearless; kids go above and beyond - even without the teacher introducing the technology (focus group; AITC) ✓ Some are more comfortable with technology than others - all have their expertise - varies by classroom and team (focus group) ✓ Some pilot projects (focus group; AITC) ✓ Pluses - Learning management system, power school, Wikispaces, Voice Threads, etc. (focus group; AITC) ✓ EW/Village/Sails - assistive technology is more prevalent (focus group; AITC) ✓ May have the product, but teacher may not know how to use it (focus group; AITC) ✓ [It] is key [that] most will have 1-2-1 next year - need refresher on software available (focus group; AITC) ✓ Have seen some teachers using AT for non-verbal students – iPad (focus group) ✓ Need more consistency (focus group) ✓ Is there a lack of advocacy for AT? Lack of knowledge by teachers and administrators (AITC; focus group) ✓ Lots of initiatives (focus group) ✓ Younger kids want to touch everything (focus group; AITC) ✓ I think the TechSteps are good - cumbersome - but the proficiency they require of students is good (focus group; AITC) ✓ Need retraining of TechSteps for teachers (focus group; AITC) ✓ Teachers definitely refer to TechSteps as the curriculum not just the assessment (AITC, 2 focus groups) ✓ TechSteps falls under project based learning (focus group; AITC) ✓ TechSteps really prepares students for Smarter Balanced Assessment (AITC) ✓ Most things we are doing have a body of evidence for communication and motivation (2 focus groups; AITC) ✓ As an agency, having AITC pushes technology integration into curriculum (AITC)	× May have the product, but teacher may not know how to use it (focus group; AITC) × Kids cannot spell, may need the software to talk it in (focus group) × Time to recognize voice - adults use this type of technology all the time (focus group) × Speech to text would be beneficial at NORTH (focus group) × Are the teachers really integrating technology into the lesson - inconsistent across schools (focus group) × Variable skills from class-to-class same with teachers not just skill but how we teach discussed setting technology expectations - by grade -portfolio for evidence maybe by month not only grade (focus group) × It is not easy, they struggle through it; challenging; technology changes so quickly; hard to keep up with it (focus group; AITC) × What is digital age proficiency (focus group)? × 21st Century: Kids struggle with getting online at Gateway – challenge (focus group) × We don't know what the teachers "see" as standards (focus group; AITC) × Need retraining of TechSteps for teachers (focus group; AITC) × We should have classes on keyboarding (focus group) – awareness for teachers that we have keyboarding software available (AITC) × Some buildings teachers do not even know about the standards or proficiency (focus group, AITC) × As technology leaders we need to better communicate how student standards reflect digital age proficiencies (focus group; AITC) × Limited research available for this population (focus group)

Essential Condition – Student-Centered Learning (ISTE, 2015j)

Student-centered learning is defined as "planning, teaching and assessment centers around the needs and abilities of students" (ISTE, 2015j, para. 1).

- Students work on substantive projects that address meaningful issues and reach beyond the classroom to real-world practice (real-world practice)
- Technology is used to improve learning (improve learning)
- Technology is used to motivate student learning (motive learning)

ACES Student-Centered Learning Rubric of Success Indicators					
Question categories	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Real-world practice		4 Focus Groups 1 AITC	3 Focus Groups		2
Improve learning		1 Focus Group	3 Focus Groups	4 Focus Groups 1 AITC	4
Motivate learning		2 Focus Groups	2 Focus Groups 1 AITC	4 Focus Groups	4

ACES Student-Centered Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Different in different academies (focus groups) ✓ Use it with younger students to motivate them (focus groups; AITC) ✓ Getting there (focus groups) ✓ Some classes - shown things they can actually go out and get a job (focus groups; AITC) ✓ The fact that they have a computer right there to search for answers to questions [they are more] comfortable (focus groups; AITC) ✓ 1-2-1 more engaging (focus groups; AITC) ✓ Recordings and videos engaging (focus groups) – may be more expected (AITC) ✓ Personal learning more engaging (AITC; focus groups) ✓ Student choice (focus groups; AITC) ✓ SMART boards and iPads have engaged students - amazing (focus groups; AITC) ✓ Edgenuity – just starting out - credit recovery - direction of future. Helps struggling student. Integral part of our future program (AITC; focus groups) ✓ Direction of the future is computer-based learning - need to move in that direction (focus groups) – future may be more project-based	× Building support people feel that it is "starting" do not think that they are perfect but more can be done (focus groups; AITC) × We have some good projects - but lacking in the real-world practice; think about the level of students in grades 6-8; goal may be real-world but they are kids being kids; may not always see the benefits in younger grades (AITC; focus groups) × Still writing curriculum (focus groups) × Difficult for some of our students (focus groups, AITC) × Beyond the classroom issues with the Netbook frustrate the staff and kids (focus group) × What do typical classrooms and teachers do? (focus group) × Kids don't know how to type on keyboard not enough tech to go around hard to plan behavior issues with devices kids are motivated and want to use tech in free time (focus groups) × Takes a while to get comfortable (focus groups) × Is it K or K-1 getting iPads? Is that the best thing for students - using touch technology when that is not what their assessment is based

ACES Student-Centered Learning Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
learning versus being about the 'computer' (AITC) ✓ TEMS and WIMS using TechSteps (AITC; focus group) ✓ One-to-one has promoted more integration than what has been seen in other districts (focus group; AITC) ✓ Can follow direct instructions, logging in or out of software applications (focus group) ✓ While delivery method is the computer, not sure it really delves into content (focus group)	on (focus groups) K-1 will still have access to labs with regular mice and keyboards for testing (AITC) × Consistency of technology working affects motivation and learning - when it fails us students are disappointed and acting out (focus groups; AITC) × Always have to have the back-up plan, e.g., writing letters and then cannot print (focus groups); backup plans are always necessary (AITC) × Misconception of technology use - e.g. IWB being used just to project versus engage student learning (AITC; focus group) × Some buildings are more - some may appear to be (focus group) × Inconsistent between and within each building (focus group; AITC) × TEMS and WIMS using TechSteps - SPED schools are not using, but should be - should be part of curriculum coordinators' roles (AITC; focus group) × TEMS - not proficient in MS Office product (focus group) × May not have equal [or] limited exposure at Village/WHEW/SAILS (focus group) × Career Cruising - students cannot log on - throws everything off (focus groups) × Connectivity is huge (focus groups) × Hard time with connectivity (focus groups) × Even with Smart Board, if it goes down - the lesson is lost when Internet goes down (focus groups) × Kids get frustrated - sours the mood (focus groups)

Essential Condition – Assessment and Evaluation (ISTE, 2015k)

Assessment and evaluation are defined as "continuous assessment of teaching, learning, and leadership and evaluation of the use of ICT and digital resources" (ISTE, 2015k, para. 1).

- Educators are prepared to apply technology in support of the assessment process (assessment literacy)
- Technology is used for the following types of assessment: Formative, summative, benchmarks, portfolios, and project-based performances (variety of assessment types)

- Administrative (certified and non-certified) staff use of technology includes accessing data for decision making, student information system reporting, communication tools, information gathering, and record keeping (data-based decision making - DBDM)
- ACES established metrics and benchmarks for effective uses of technology by students (benchmarks)
- Formal technology-related structures and processes engage parents, community members, school faculty, and learners in meaningful exchanges, interactions, and partnerships that advance the vision (community engagement)

ACES Assessment and Evaluation Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Assessment literacy		2 Focus Groups	4 Focus Groups 1 AITC	2 Focus Groups	3
Variety of assessment types		2 Focus Groups	4 Focus Groups 1 AITC	2 Focus Groups	3
DBDM		3 Focus Groups 1 AITC	2 Focus Groups	3 Focus Groups	2
Student benchmarks		4 Focus Groups 1 AITC		2 Focus Groups	2
Community engagement	2 Focus Groups	3 Focus Groups 1 AITC	2 Focus Groups		2

ACES Assessment and Evaluation Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Career Cruising, iReady, Wood-Cock Johnson (focus group) ✓ Everything new - we use electronic exit tickets, Google forms, Tech Steps, P[roject] B[ased for] all TechSteps, iReady, Pearson, teacher made (focus group; AITC) ✓ iReady (truly technology-driven assessment, benchmarks, progress monitoring is formative) (focus group; AITC) ✓ SBAC; make sure the teachers are using the free tools available on the SBAC site (focus group; AITC) ✓ Sample released performance task (focus group; AITC) ✓ iReady if a student has a question on technology, you answer it (focus group; AITC) ✓ Tech Steps - benchmarks (focus group; AITC) ✓ Formal tech structure: Moodle/Canvas; website - set up for but not all parents use it; it is one-way, not interactive (focus group) Moving from Moodle to Canvas will increase engagement (AITC) ✓ School messenger (focus group; AITC) ✓ We have had to change how we gather data because of the SLOs through the CSDE (focus group; AITC)	× Some things mentioned are more in maintenance - but not project-based performances not yet (focus group) × Not all assessment programs are digital or have not been updated (e.g., WJIII) (AITC) For some areas, e.g., guidance needs a curriculum process to examine and suggest new assessments and/or updates available – awareness (AITC) × Just starting to develop portfolio and project based performances (focus group; AITC) × We know that they are logging in after that we do not know (focus group) × WIMS and TEMS (grades 6-8, 2) - ask them what their TechSteps, they are doing as summative assessment - just fit it in somewhere where it works; technology is not in the forefront of instruction (focus group) × Tool used - but not integrated (focus group) × Tricky - how does the starred lessons translate to what it looks like in the classroom (focus group) × Not sure how many teachers are using the practice tests (focus group) × SBAC technology skills needed (focus group) × We have many one-way communication platforms, but few exchange opportunities (focus group; AITC)

ACES Assessment and Evaluation Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ Communication structures: Facebook, Twitter, PowerSchool, School Messenger (focus group; AITC) ✓ ISTE standards (focus group; AITC) ✓ Speak UP Surveys (AITC)	× DBDM - getting there because other schools can get data easier than we do - we have to use Excel and other ways to pull data ourselves (focus group) × We always had to develop our own way to collect data (focus group) × Can't use tools like PowerSchool - not for this population (focus group) awareness (AITC) × Cannot just go and purchase something that works for our students (focus group) × Metrics and benchmarks: there are students for technology and students - but don't know what they are (focus group) awareness (AITC) × Not the same at all for certified and non-certified staff. For example, it would be helpful if TAD could take attendance in PowerSchool (focus group; AITC) × If teachers are not in the room, others cannot connect to SmartBoard or laptop (focus group; AITC) × Timing is important. Parents' communication through technology? Not sure. (focus group) × Exchanges with other schools not happening (focus group) we can always do more (AITC) × TechSteps; Not necessarily in all classes (AITC; focus group) × Lots of surveys - what about the community - nothing (focus group; AITC) × Vision? Doesn't permeate across the district (focus group) × ABLE needs to be rebuilt - crashes - no past information (AITC; focus group) × New CTAA (new checklist Smarter Balanced) issues (AITC)

Essential Condition – Engaged Communities (ISTE, 2015l)

Engaged communities is defined as "partnerships and collaboration within communities to support and fund the use of ICT and digital learning resources" (ISTE, 2015l, para. 1).

- ACES participates in collaborative efforts between schools and districts (Regional collaboration)

ACES Engaged Communities Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Regional collaboration	1 Focus Group	3 Focus Groups 1 AITC	3 Focus Groups	1 Focus Group	2

ACES Engaged Communities Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ PDSI; curriculum consortium; RESC Alliance (focus group) ✓ TEMS Expo nights for the entire community (AITC) ✓ Digital citizenship and Internet safety nights for parents (AITC) ✓ One school working with another school. Examples: Hour of Code (2 focus groups), Scratch programming (focus group) ✓ Curriculum coordinators boosted these areas (focus group) ✓ IEP Direct - information shared between districts. PowerSchool (focus group) ✓ Technology Council at PDSI – Technology leaders and library media specialists from 24 ACES school districts (AITC) ✓ Opportunity to have a more blended curriculum and technology discussions (AITC) ✓ We have many higher education resources around us as well as the Science Center and Eli Whitney (AITC)	× We have more diverse populations - gifted and non-verbal; spectrum (focus group) × Reduction of grant funding (e.g., EETT) has affected the ability to collaborate cost effectively (AITC) × Without the grant funding, it is harder to maintain the higher education and community education centers (AITC) × Lack of collaboration between ACES schools and receiving districts' high schools (AITC); this would be an opportunity for ACES schools (AITC)

Essential Condition – Support Policies (ISTE, 2015m)

Support policies is defined as "policies, financial plans, accountability measures and incentive structures to support the use of ICT and other digital resources for learning and district school operations" (ISTE, 2015m).

- ACES has formal and informal processes to revise administrative policies and practices accordingly (policies)

ACES Support Policies Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
Policies		2 Focus Groups	2 Focus Groups	4 Focus Groups 1 AITC	4

ACES Support Policies Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ AITC (focus group) ✓ AUP (focus group) ✓ Filters (focus group) ✓ For example, when adopting BYOD, AITC reviewed any existing policies and CABE suggested policies – the Executive Team and ACES Governing Board were supportive in adjusting existing policies and regulations as needed (AITC) ✓ Informally, ICT related governance and guidance documents are provided for key issue topics, i.e., Social Media, BYOD (AITC)	× May have processes - but are they working? (focus group) × Multiple - do not know (focus group) × Communication of ICT related policies and procedures is lacking (AITC)

Essential Condition – Supportive External Context (ISTE, 2015n)

Supportive external context is defined as "policies and initiatives at the national, regional and local levels to support schools and teacher preparation programs in the effective implementation of technology for achieving curriculum and learning technology standards" (ISTE, 2015n, para. 1).

- ACES
- CSDE
- USDE

ACES Supportive External Context Rubric of Success Indicators					
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode Score**
ACES	1 Focus Group	3 Focus Groups	3 Focus Groups 1 AITC	1 Focus Group	3
CSDE			1 AITC		3
USDE			1 AITC		3

ACES Supportive External Context Strengths and Weaknesses Grid of Stakeholders' Responses	
Strengths (rubric score 3 or 4)	**Weaknesses (rubric score 1 or 2)**
✓ PDSI; curriculum consortium; RESC Alliance (focus group) ✓ Technology Council at PDSI – Technology leaders and library media specialists from 24 ACES school districts (AITC) ✓ Opportunity to have a more blended curriculum and technology discussions (AITC) ✓ We have many higher education resources around us as well as the Science Center and Eli Whitney (AITC) ✓ CSDE 2013-2014 grant supporting technology (AITC) and pending 2014-2015 grant being released (AITC) ✓ CAPSS – CABE 2014-2015 position paper on personalized learning ✓ Since 2009 USDE, CSDE, and ACES anti-bullying policies – resulting climate professional development in schools which includes cyber-bulling and acceptable use and behavior (AITC) ✓ USDE CIPA and COPPA laws to product student privacy (AITC) ✓ FCC OnGuard Online support for school in understanding CIPA and COPPA (AITC) ✓ E-rate funding to schools (AITC)	× Reduction of grant funding (e.g., EETT) has affected the ability to collaborate cost effectively (AITC) × Without the grant funding, it is harder to maintain the higher education and community education centers (AITC) × Lack of collaboration between ACES schools and receiving districts' high schools (AITC) This would be an opportunity for ACES schools (AITC) × Need to revisit and refresh external policies at the state and federal level (AITC)

Needs Assessment Recap

ACES Essential Conditions Recap Rubric of Success Indicators = Internal (Groups per Essential Category)						
Essential Conditions	**Pre-Awareness (no effort) 1**	**Awareness (starting) 2**	**Emergent (getting there) 3**	**Maintenance (ongoing) 4**	**Mode**	**Weighted Average**
Shared vision	0	7	16	5	3	2.93
Empowered leaders	0	0	3	0	3	3.00
Implement/ Plan	0	1	3	0	3	2.75
Consistent and adequate funding	0	4	**7**	13	4	3.38
Equitable Access	11	19	16	6	2	2.33
Skilled Personnel	0	1	3	0	3	2.75
Ongoing Professional Learning	4	19	19	9	2	2.65
Technical Support	2	31	23	23	2	2.85
Curriculum Framework	3	11	21	9	3	2.82
Student-Centered Learning	0	8	9	9	3	3.04
Assessment and Evaluation	2	17	14	9	3	2.71
Engaged Communities	1	4	3	1	2	2.44
Support Policies	0	2	3	5	4	3.30
Supportive External Context	1	3	6	1	3	2.64

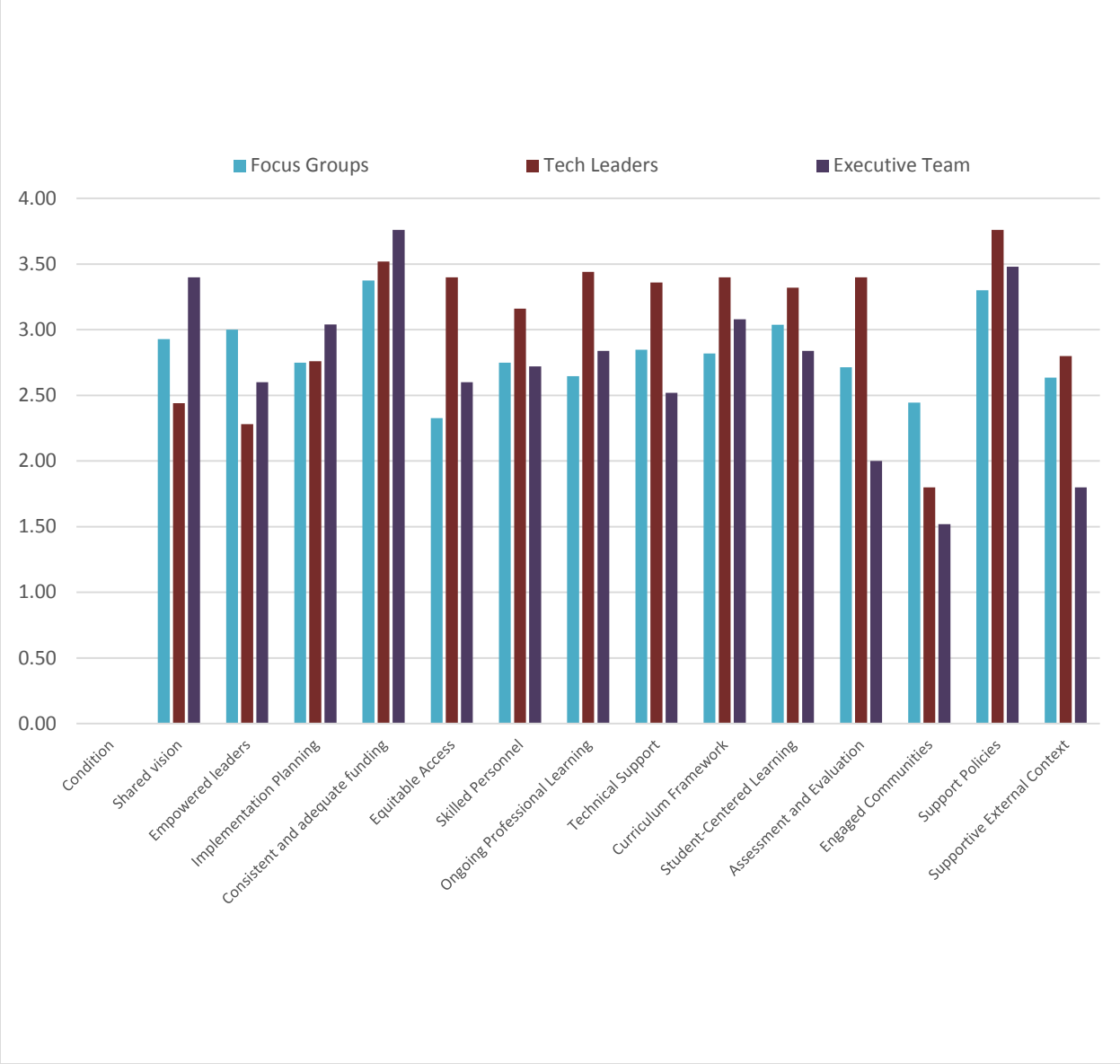

Figure 1. Comparison chart of the SpeakUp Survey results, ISTE 14 Essential Conditions for technology planning focus group results, and ISTE Lead & Transform Diagnostic Tool for technology leaders. Stakeholders represented are the focus groups, technology leaders, and executive team.

Internal (I) and External (E) Factors Opportunities and Emerging Themes Grid (Using the Weighted Average Cut Off of .75 Rounds UP)	
Opportunities (3 or 4)	**Threats (1 or 2)**
✓ Shared vision (I) o Speak Up survey – recommend as part of an annual process (I) o Curriculum coordinators supporting vision and integration (I) ✓ Empowered leaders (I) o Continue use and examination of survey tools like Speak Up and Lead and Transform (I) o Technology leaders are empowered and communicate the vision of technology integration and planning back to their PLC (I) ✓ Implementation planning (I) – Having a plan, goals, roadmaps, and milestones (I) ✓ Consistent and adequate funding (I) e.g., 1-2-1 for ten years, 3 year refresh on equipment, annual examination of hardware, software, and policies (I) ✓ Skilled personnel (I) – technology teacher at Mill (I) – online collaboration tools used more than ever, technology conferences, online tech PD (I) ✓ Technical support (I) o BYOD not working right; not happening at all locations – awareness issue (2015 new) (I) o Help desk tool is available – need more awareness or marketing or examining reports and effectiveness (I) o One-to-one support (I) o Having a technology plan (I) o Continue examining of existing technologies to meet administrative needs (I) ✓ Curriculum framework – curriculum coordinators used as champions for technology integration (I) effective use of available technology resources including TechSteps ✓ Student-centered learning (I); recognized how technology supports engaged personalized learning (I) ✓ Support policies (I) ACES is responsive to the need for policy examination and revisions	× Equitable access (I) o Internet access outside of school (I) o Device access is not equitable Internet access (I) o One-to-one for all – staff and students (I) o Digital citizenship – awareness and professional development for all stakeholders (I) o UDL awareness (I) × Ongoing professional learning (I) o Digital literacy for both students and adults (I) o Current – external scanning (I) o PD needed for both certified and noncertified staff (I) o Integration of technology in support of the curriculum – awareness, curriculum writing? Differentiation? Canvas rollout needs to include copying template lessons from curriculum writers (I) o Time! For learning what is new and how it relates to individuals' classrooms (I) o Vision – overall and technology -- communicating it and valuing it – articulating in a way that ties initiatives to the vision (I) × Assessment and evaluation (I) o Tech Steps – needs consistent use – just fitting it in (I) o Digitally available assessments for DDM - communication of what is available (I) o Teacher evaluation SLO requirements have a positive side more data usage (I) × Engaged communities and supportive external context (I) o Expand learning communities to PLN (professional learning networks) – interdisciplary (I)

Internal (I) and External (E) Factors Opportunities and Emerging Themes Grid (Using the Weighted Average Cut Off of .75 Rounds UP)	
Opportunities (3 or 4)	**Threats (1 or 2)**
through AITC, Governing Board, and Executive Team (I) ✓ BYOD ready (E) – but need buy-in and awareness by staff and administration (I) ✓ One-to-one for K-12 students planned for 2015-2016 (I) ✓ Learning management system (LMS) to support blended and personalized learning and flipped classrooms and self-directed (E) ✓ Diffusion and ongoing implementation processes – find and build 'champions' for each project – capacity (E) ✓ Digital citizenship (E) – programs and resources already available for delivery to staff and students (I) ✓ Digital literacy (E) - programs and resources already available for delivery to staff and students – need time and champions at each location (I) ✓ DBDM - programs and resources already available for delivery to staff and students – need time and champions at each location (I) ✓ Teacher evaluation SLO requirements have a positive side more data usage (I)	o Reduction of grant funding – advocacy (I) o Awareness of ACES local foundation grants and innovation initiatives opportunities (I) × BYOD (E) – need awareness and PD (I) × One-to-one sustained budget, training for staff new to one-to-one, lack of adoption, support (I) × Missing one-to-one for all staff (I) × Lacking communication channels to build awareness – digital citizenship (I) × Self-directed learning (E) – staff need help getting started (e.g., course on Lynda.com and time together)- link to time comment (I) × Learners – includes students, educators, and staff – all learners need to be considered when rolling out software (E) and link to PD × Champions (E) – need to create budget proposal for coaches or stipend positions (I) curriculum coordinators embracing technology integration × Makers' spaces, library as digital commons – needs investigation (E) × Project-based learning at awareness level (E) × Digital citizenship, accountability, and student data privacy (E) × Perceived downward trend of alternative schools and classrooms for special needs students - advocate (E)

Themes

Intermediate Themes for Discussion	New Themes
The Why: ✓ Digital citizenship ✓ Digital literacy ✓ Personalized and blended learning (for adults and students) ✓ Equitable access – one to one for staff and students, universal design for learning (UDL) ✓ Makers' spaces	The Why: ✓ Digital citizenship and literacy ✓ Personalized and blended learning using universal design (for adults and students) ✓ Equitable access – one-to-one and BYOD for staff and students ✓ Makers' spaces – project-based and active learning
The What: ✓ One-to-one for all (adults and students) ✓ BYOD ✓ Blended and flipped learning (also called active learning)	(Note: "The What" themes have been moved into "Why" and "How")
The How – Innovation Diffusion & Scaling: ✓ Evidence-based practices - DBDM ✓ Ongoing Professional Learning o Self-directedness o Online resources o Workshops o Staff meeting discussions o UDL ✓ Communication and collaboration to build awareness - Use existing PLC communication channels and staff meetings as tools for awareness ✓ Continuous support after initial rollouts ✓ Develop 'champions' in each building	The How – Innovation Diffusion & Scaling: ✓ Evidence-based practices and action research ✓ Ongoing professional learning o Self-directedness o Face-to-face: Workshops, PLCs, lead teachers, and staff meeting discussions o Online resources curated into the learning management system o Continuous communication and collaboration to build awareness and experimentation through existing PLC communication channels and staff meetings o Continuous support after initial rollouts o Develop 'champions' in each building

PLAN IMPLEMENTATION

LEA Technology Goals and Strategies (CSDE, 2012, p. 12)

The LEA technology plan should be aligned to the National (USDE, 2010) and State Technology Plans and include the following Connecticut State and National Goals. The LEA may include any additional goals that apply to their technology plan.

Goal 1: Learning – Engage and Empower

Goal 2: Assessment – Measure What Matters

Goal 3: Teaching – Prepare and Connect

Goal 4: Infrastructure – Access and Enable

Goal 5: Productivity – Redesign and Transform

Goal 6: Research and Development – Innovate and Scale

Goal 1: Engaging and Empowering Learning Experiences

National Technology Plan	State Technology Plan
1.0 Learning: Engage and Empower *All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable and ethical participants in our globally networked society.*	***Goal 1: Engaging and Empowering Learning Experiences*** *All learners will have engaging and empowering learning experiences both inside and outside of school that prepare them to be active, creative, knowledgeable and ethical participants in our globally networked society.*
What will your district do over the life of this local educational technology plan to ensure that learning experiences are empowering, engaging, and supported by digital tools?	

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Themes			
Ongoing review of themes	ACES Internal Technology Committee (AITC) Central Curriculum Committee District Data Team Director of Technology Services Director of Educational Technology	Monthly, district-wide meetings and weekly PLCs to research themes and create individual action plans Monthly, offer Givers and Takers – train-the-trainer series of workshops Monthly, offer self-directed, online courses to introduce teachers to Lynda.com and Canvas in a series of workshops called 'Desire to Learn'. While using the online platform, face-to-face assistance will be provided to kick-start staff becoming accustomed to online learning experiences. The Why: Digital citizenship and literacy Personalized and blended learning using universal design (for adults and students) Equitable access – one-to-one and BYOD for staff and students Makers' spaces – project-based and active learning The How – Innovation Diffusion: Evidence-based practices and action research	Feedback on document through Intranet Number of learners using Canvas Number of professional development opportunities Number of *Givers & Takers* train-the-trainer courses Number of *Desire to Learn* courses through Lynda.com

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**

		- Ongoing professional learning
		  - Self-directedness
		  - Face-to-face: Workshops, PLCs, lead teachers, and staff meeting discussions
		  - Online resources curated into the learning management system
		  - Continuous communication and collaboration to build awareness and experimentation through existing PLC communication channels and staff meetings
		- Continuous support after initial rollouts
		- Develop 'champions' in each building	

Connecticut Common Core Standards and National Educational Technology Standards Aligned			
Ongoing review of the CT Common Core State Standards (Mathematics and English Language Arts), Social Studies C3 Framework	- ACES Internal Technology Committee (AITC) - Central Curriculum Committee	- Monthly district-wide meetings for both committees - August, review CT Common Core/Social Studies changes/additions annually - Monthly, review Curriculum Consortium documents identifying where technology integration would enhance student learning	- Feedback on document through Intranet - Number of units and courses created in Canvas
Review CSDE direction on Student Success Plans (SSP) for students in grades 6-12 by reviewing electronic options through Career Cruising and Canvas.	- Central Curriculum Committee - AITC	- September: Review electronic options through Career Cruising and Canvas to support SSP	- Meeting agenda logs and notes - Reports on student portfolios
Crosswalk CT CCSS/ Social Studies C3 Framework with International	- AITC - Central Curriculum Committee	- Monthly concentrate on one standard: - September: Creativity and Innovation (NETS-S1)	- Shared intranet wiki of integration ideas

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Society for Technology in Education (ISTE) National Educational Technology Standards for Students (NETS-S)		⌨ October: Communicate and Collaborate (NETS-S2) ⌨ November: Research and Information Fluency (NETS-S3) ⌨ December: Critical Thinking, Problem Solving, Decision Making (NETS-S4) ⌨ January: Digital Citizenship (NETS-S5) ⌨ February: Technology Operations and Concepts (NETS-S6) 🖱 Monthly, examine Edvation's Tech Steps, project-based technology performance tasks. There are six integrated tasks per grade level.	🖱 Monthly map Tech Steps fit into existing core curriculum maps
Create a bank of scholarly literature of best practices, project-based learning, and 21st Century resources for technology inclusion and differentiation in all curriculum areas	🖱 AITC 🖱 Curriculum coordinators 🖱 Building level PLC data teams (usage only)	🖱 July, review criteria for scholarly literature 🖱 September, create bank ready for ongoing updates 🖱 Monthly, review bank of current reviews and remove old information	🖱 Bank with current scholarly literature on intranet 🖱 Criteria rubric document for deciding which articles are scholarly on intranet
Gather stakeholder engagement input through Speak Up Survey 🖱 Continue annual stakeholders' surveys on technology	🖱 AITC	🖱 December, participate in the Speak Up Survey 🖱 February, share survey data with AITC to review and compare previous year's data 🖱 Share findings with Curriculum Committee and Principals 🖱 Suggest adjustments to technology plan	🖱 Analysis of survey response posted on intranet
NETS-S #1: CREATIVITY AND INNOVATION - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.			
Continue to support the use of	🖱 AITC	September, review related logs and reports of usage of existing tools for	🖱 Analyze help desk logs of

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
innovative tools and Makers' Spaces (e.g., probes for real-time data collect in science classes, create original animations, voice threads, photography projects, video reports, robotics, Canvas courses, spreadsheets for forecasting, online simulations for dissection)	• Technology Services • Principals • Educators	NETS-S Standard #1 creativity and innovation • Monthly, analyze help desk logs of support questions. Look for common, repeated questions. • Monthly, communicate resources to teachers. Do teachers need reminders of the tools' availability and worth? • Monthly, review Canvas reports on types of interactive modules implemented by content areas • Monthly, work with Curriculum Department to provide a consistent presence of technology integration in curriculum units and lessons.	support questions • Review equipment checkouts and usage logs • Canvas reports
Recommend technology integration tools to support student creativity and innovation (NETS-S 1) • Investigate promising integration tools • Evaluate newer technology tools to improve digital literacy linked to an examination of curriculum content being delivered in a digital context	• AITC • Building level PLC data teams • Content Curriculum Committees	• September, review curriculum documents, scope and sequence, recommended activities, and technologies for NETS-S Standard #1 creativity and innovation. • Compare with research based recommendations • Recommend further evaluation of promising integration ideas • If recommended for full evaluation, attend webinars, request vendor demonstrations, etc.	• Updated curriculum documents on intranet • Report on teacher and student blog of ideas • Reviews and evaluation rubric scores
NETS-S #2: COMMUNICATE AND COLLABORATE - Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others			
Continue to align student application tools for	• AITC • Technology Services	August, deliver Canvas (learning management system) refresher courses for teachers and	• Analyze help desk logs of

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
communication and collaboration needs	✓ Principals ✓ Educators	administrators, emphasizing school-to-home communications and student collaboration October, review related logs and reports of usage of existing tools for NETS-S Standard #2 communicate and collaborate ✓ Analyze help desk logs of support questions. Look for common, repeated questions. ✓ Examine usage logs. Do teachers need reminders of the tools' availability and worth?	support questions ✓ Software logs and reports
Continue to use the ACES Canvas learning management system to provide student, parent, and teacher access to curriculum from school or home	✓ AITC ✓ Technology Services ✓ Principals ✓ Educators	October, review related logs and reports of usage of existing tools for NETS-S Standard #2 communicate and collaborate ✓ Analyze help desk logs of support questions. Look for common, repeated questions. ✓ Examine usage logs. Do teachers need reminders of the tools' availability and worth?	✓ Analyze help desk logs of support questions ✓ Review Canvas and Parent portal usage reports
Recommend technology integration tools to support student communication and collaboration (NETS-S 2) ✓ Investigate promising integration tools ✓ Evaluate newer technology tools	✓ AITC ✓ Building level PLC data teams ✓ Content Curriculum Committees or Regional Curriculum Councils	✓ October, review curriculum documents, scope and sequence, recommended activities, and technologies for NETS-S Standard #2 communicate and collaborate ✓ Compare with research-based recommendations ✓ Recommend further evaluation of promising integration ideas ✓ If recommended for full evaluation, attend webinars, request vendor demonstrations, etc.	✓ Updated curriculum documents on intranet ✓ Report on teacher and student blog of ideas ✓ Review and evaluate rubric scores (e.g., Tech Steps)
Provide individual and collaborative online learning experiences, that are available anytime and anywhere	✓ AITC ✓ Technology leaders ✓ Classroom Teachers	✓ Monthly e-blasts about online learning available through Lynda.com and Canvas ✓ Continue to develop instructional practices leveraging BYOD, one-to-one, and cloud computing.	✓ Usage reports from Lynda.com and Canvas ✓ Workshop evaluations

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Provide research and guidance on digital citizenship of all learners (adults and students)	AITC	May, review social media governance documents May, provide current research on digital citizenship, acceptable and responsible use, cyber bullying and interventions, such as, emotional intelligence and mindfulness	Number of workshops and e-blasts Workshop evaluations
NETS-S #3: RESEARCH AND INFORMATION FLUENCY - Students apply digital tools to gather, evaluate, and use information.			
Continue to provide appropriate and enriching print, non-print, and digital materials for educators and learners to increase their skills in information literacy	AITC Technology Services Principals Educators Library Media Specialists	November, review related logs and reports of usage of existing tools for NETS-S Standard #3 research and information fluency Analyze Destiny logs Create and share library resources reports by curriculum areas through Title Wave software Create and share circulation reports by month by grade through Destiny Compare ACES collections to the state recommended standards for library collections by grade and content area	Destiny circulation reports Title Wave reports
Expand existing use of online e-books, interactive books, and digital equipment Investigate new digital resources that will engage and promote deeper student learning which in turn will strengthen their information and media literacies	AITC Technology Services Principals Educators Library Media Specialists	November, review related logs and reports of usage of existing tools for NETS-S Standard #3 research and information fluency Analyze help desk logs of support questions. Look for common, repeated questions. Examine logs of equipment checkouts. How often is the equipment being used? Is it accessible? Do teachers need reminders of the tools' availability and worth? Work with building level PLC data teams to collect pre and post test data on student reading growth November, create student engagement survey	Review e-book title logs for checkouts Review equipment checkouts and usage logs Student engagement survey Online interactive textbook usage

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
		◦ November, evaluate usage of online interactive textbooks (e.g., Pearson Interactive Science)	
Evaluate physical and/or virtual libraries in each building within the ACES community	◦ AITC ◦ Technology Services ◦ Principals ◦ Educators ◦ Library Media Specialists	November, review related logs and reports of usage of existing tools for NETS-S Standard #3 research and information fluency ◦ Examine the feasibility of sharing e-book resources between buildings. ◦ Examine whether sub-sites for the special education resources can be combined with the Mill Road library catalog and circulation system.	◦ Review Destiny requirements with Follett ◦ Informal count or inventory of materials at each location that does not have a library system
Continue to support our library research curriculum (e.g., American Association of School Libraries, the Center for Media Literacy, Library of Congress, iConn).	◦ AITC ◦ Technology Services ◦ Principals ◦ Educators ◦ Library Media Specialists	November, review curriculum documents, scope and sequence, recommended activities, and technologies for NETS-S Standard #3 research and information fluency including online research tools	◦ Update curriculum documents ◦ Update scope and sequence ◦ Update suggested activities
NETS-S #4: CRITICAL THINKING, PROBLEM SOLVING, AND DECISION MAKING - Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.			
Recommend technology integration tools to support student critical thinking, problem solving, and decision making (NETS-S 4) and continue to use Web 2.0 simulation and web concept mapping tools to problem solve.	◦ AITC ◦ Technology Services ◦ Principals ◦ Educators ◦ Library Media Specialists (LMS)	December, review related logs and reports of usage of existing tools for NETS-S Standard #3 research and information fluency ◦ Analyze help desk logs of support questions. Look for common, repeated questions. ◦ Examine usage logs. Do teachers need reminders of the tools' availability and worth?	◦ Review usage logs ◦ Review LMS Big 6 and Super 3 lesson plans
Continue to use Bloom's Digital Taxonomy and	◦ AITC	December, review related logs and reports of usage of existing tools for	◦ Review usage logs

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Webb's Depth of Knowledge (DoK) to help students move their learning and performance to higher thinking levels through technology integration.	Technology Services Principals Educators Library Media Specialists	NETS-S Standard #3 research and information fluency Review curriculum documents for higher levels of Bloom and DoK Examine usage logs. Do teachers need reminders of the tools' availability and worth? Expand the AITC Blooms Apps list for iPads and iTouchs. While teachers have access to the list through interfACES, add student access through Canvas.	Review curriculum documents
NETS-S #5: DIGITAL CITIZENSHIP - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.			
Expand student Internet safety knowledge through existing resources (e.g., Edvation Technology Software Subscription, Common Sense Media, FCC On Guard Online, and Ball State's Professor Garfield Internet Safety Lab).	AITC Technology Services Principals Educators	January, annually review available materials to make sure they are covering the newest cyber safety issues: Select from provided lessons the top two per quarter for students and parents Using online safety rubric from Edvation and the FCC one per academic marking periods (e.g., semester, trimester) with assessment scoring areas in Edvation Expand laptop roll-out to include a certificate course before students are allowed to take laptops home Schedule parent nights Continue to distribute safety literature at any parent event or technology expo Continue to include cyber safety issues within the annual student and parent climate surveys	Edvation Tech Steps student technology profile report Student climate surveys Parent climate surveys Student code-of-conduct checklists data
Continue to annually review all acceptable use policy related documents: student code of conduct	AITC Technology Services Principals Educators	May, review related logs and reports of usage of existing tools for NETS-S Standard #5 digital citizenship Examine usage logs of Tech Steps cyber safety profiles. Do	Analyze Tech Steps Profile report Review usage logs

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
checklist (3 levels), laptop agreement, special projects form, governance documents, frequently asked questions document	Library Media Specialists	teachers need reminders of the tools' availability and worth? Continue to provide student technology code-of-conduct checklist in multiple reading levels (lower, middle, high) Expand student understanding of technology netiquette and its importance in communicating with diverse cultures.	
Provide research and guidance on digital citizenship of all learners (adults and students)	AITC	May, review social media governance documents May, provide current research on digital citizenship, acceptable and responsible use, cyber bullying and interventions, such as, emotional intelligence and mindfulness	Number of workshops and e-blasts Workshop evaluations
Recommend technology integration tools to support student digital citizenship (NETS-S 5) Investigate promising integration tools Evaluate newer technology tools	AITC Building level PLC data teams Content Curriculum Committees	January, review curriculum documents, scope and sequence, recommended activities, and technologies for NETS-S Standard #3 research and information fluency Compare with research based recommendations Recommend further evaluation of promising integration ideas If recommended for full evaluation, attend webinars, request vendor demonstrations, etc.	Updated curriculum documents on intranet Report on teacher and student blog of ideas Reviews and evaluation rubric scores Review Tech Steps student profiles
NETS-S #6: TECHNOLOGY OPERATIONS AND CONCEPTS - Students demonstrate a sound understanding of technology concepts, systems, and operations.			
Re-examine the productivity technology operations and concepts scope and sequence to update for more current technology	AITC Technology Services Principals Educators Library Media Specialists	February, review related logs and reports of usage of existing tools for NETS-S Standard #6 technology operations and concepts Analyze help desk logs of support questions. Look for common, repeated questions. Examine logs of equipment checkouts. How often is the	Analyze help desk logs of support questions Review equipment checkouts and usage logs

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
		equipment being used? Is it accessible? - Do teachers need reminders of the tools' availability and worth? - Recommend keyboard solution for grades K-8 (in preparation of CCSS online assessments) - Evaluate and recommend a cloud storage solution for students - Evaluate alternate productivity tools	- Review Edvation student performance based assessment rubrics and scores
NETS-S STUDENT INFORMATION, COMMUNICATION & TECHNOLOGY (ICT) PROFILES BY STAGE OR GRADE BANDS TO PREPARE FOR LIFE, COLLEGE, AND CAREERS.			
Evaluate the NET-S student profiles to discover gaps in student growth and information needed for future CSDE Student Success Plans (grades 6-12)	- AITC - Teachers - Guidance - Transition teachers	- April, review student profiles (Stages 1-5, Grades PK-2, Grades 3-5) - May, review student profiles and potential Student Success Plans (Grades 6-8, High School) - Review potential self-directed learning opportunities for students to gain knowledge in specific content topics beyond the curriculum or as reinforcement to curriculum (e.g. Khan Academy, Hippo Campus, Lynda.com)	- Student profile documents under Curriculum section of intranet - Software report by checklist standards – with achievements and gaps
CURRICULUM CONTENT AREAS			
Review the Curriculum documents for ideas where technology integration will improve student growth	- AITC - Curriculum Committee - Curriculum Department - Building level PLC data teams	Monthly, technology integration reviews: Review curriculum documents; suggest and evaluate appropriate technology tools. - October, **language arts** - November, **mathematics** - December, **science** - January, **social studies** - February, **information, communication, and technology (ICT)** - March, **health** - April, **developmental** - April, **guidance** - May, **art**	Create log of technology integration ideas on Art Curriculum intranet area

Action Plan for Goal Area 1: Learning			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
		May, **physical education** May, **music** June, **world languages**	

Goal 2: Assessment

National Technology Plan	State Technology Plan
2.0 Assessment: Measure What Matters *At all levels, our education system will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*	***Goal 2: Assessment*** *At all levels, our education system will leverage the power of technology to measure what matters and use assessment data for continuous improvement.*
What will your district do over the life of this local educational technology plan to ensure that technology is used for assessment?	

Action Plan for Goal Area 2: Assessment			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
STUDENT ASSESSMENTS			
Smarter Balanced: Prepare teachers and students for online Smarter Balanced summative assessments.	Curriculum Committee Curriculum Coordinators AITC	Monthly, provide teachers support in accessing Smarter Balanced and Digital Library resources	Number of online assessments accessed
Smarter Balanced performance task assessments: Prepare teachers and students for online Smarter Balanced performance task assessments.	Curriculum Committee AITC	April-May, provide teachers support in preparing and delivering Smarter Balanced Assessments	Assessments data used by PLC Data Teams

Action Plan for Goal Area 2: Assessment			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Based on their educational goals, 100% of 8th graders will demonstrate growth towards proficiency in the use of technology to find, organize, and communicate information	• Classroom teachers • AITC	• Bi-monthly, project-based technology assessment grades K-8 (AUP Checklist, Unique Curriculum, and Tech Steps) • Teachers and students will be responsible for fulfilling the district-wide requirements for technology assessments • Teachers are responsible for ensuring that students complete assessments; also for reviewing the student data on school curricular data teams	• Student technology profile from Tech Steps • Report Card technology rubric scores.
Electronic formative assessments: probes, classroom response systems, GPS, online assessments (e.g., Smarter Balanced, iReady, Canvas, Power Teacher Gradebook)	• Teachers	• September, offer refreshers courses on how to create Canvas outcomes, surveys, quizzes, and test banks • Monthly, check that equipment is available through the library or science teachers (probes) • Continuously, online workshops available free 24/7 from Smart Technologies, Vernier, and Garmen	• Teachers and students receive immediate feedback during lesson. • Students collect data through probe tools and analyze either through the probe software or import into spreadsheets if further analysis is needed.
Students in grade 6-12 will create an electronic and portable portfolio as indicated in their SSP; Capstone experiences and demonstration of 21st century skills will be included	• Teachers • Students • Guidance • Administrators • AITC • Central Curriculum Committee • ACES RESC Consortium	• October, administration will ensure funding for electronic and portable portfolios • Spring, teachers will provide Capstone experiences that embed 21st century skills • Spring, students will work to create quality projects and reflections to include in their portfolios	• Portfolio rubrics determined by software platform determined by Curriculum Committee (e.g., Naviance and/or Career Cruising)

Action Plan for Goal Area 2: Assessment			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Student and parent perception data through questionnaires	AITC Curriculum Committee Climate Committees Data Teams	December, administer technology survey through Speak Up February, review survey results April, report results	Survey results aggregated by grade level
TEACHER EVALUATIONS OR ASSESSMENTS			
Walk-throughs	Building Data Teams Curriculum Committees AITC Building Principals Building-level technology committee	Quarterly, following walk-through protocol, examine an identified area of concentration If teachers need updated Walk Through workshops, the building administrator may make arrangements through the PLC Data Teams	Walk through data collection sheets Walk through report
Administrator, teacher, and staff perception data through questionnaires	AITC Curriculum Committee Climate Committees Data Teams	December, administer technology survey through Speak Up February, review survey results April, report results	Survey results aggregated by grade level
Educator evaluation system	PDEC AITC	Ongoing, support of BloomBoard for teacher evaluation system Annually, review teacher evaluation plan for changes/additions that might affect options set in BloomBoard	Number of BloomBoard support requests
HARDWARE, SOFTWARE, AND INFRASTRUCTURE ASSESSMENT			
Software satisfaction survey user acceptance test (UAT)	AITC Central Curriculum Committee PLC Data Teams	Monthly, AITC receives requests to evaluate software from multiple committee groups. Using the AITC software evaluation sheet, the group will either evaluate as a whole or create a subcommittee to investigate and bring back to the committee.	AITC software evaluation sheet Helpdesk logs Network logs Staff questionnaires
Hardware evaluation	AITC Building level technology	September, use bid specifications and feedback	AITC hardware evaluation sheet Helpdesk logs

Action Plan for Goal Area 2: Assessment			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
	committee meetings	from AITC on equipment satisfaction March, bids for equipment	Network logs Staff questionnaires
Infrastructure assessment	AITC Technology Services	Daily, review network reports on usage.	Helpdesk logs Network logs Staff questionnaires
Maintenance and end-of-life schedules for equipment	Technology Services AITC	November, use leases, asset tracking, and maintenance scheduling to determine end-of-life for equipment	Destiny asset tracking module reports

Goal 3: Connected Teaching and Learning

National Technology Plan	State Technology Plan
3.0 Teaching: Prepare and Connect *Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that enable and inspire more effective teaching for all learners.*	***Goal 3: Connected Teaching and Learning*** *Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that can empower and inspire them to provide more effective teaching for all learners.*
What will your district do over the life of this local Educational Tech Plan to ensure that educators are prepared to teach 21st Century learners and are connected to technology resources that support teaching and learning?	

Action Plan for Goal Area 3: Teaching			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
National Educational Technology Standards for Administrative Leaders (NETS-A): (1) Visionary leadership; (2) digital age learning culture; (3) excellence in professional practice; (4) systematic improvement; and (5) digital citizenship. **National Educational Technology Standards for Teachers (NETS-T):** (1) Facilitate and inspire student learning and creativity; (2) design and develop digital age learning experiences and assessments; (3) model digital age work and learning; (4) promote and model digital citizenship and responsibility; and (5) engage in professional growth and leadership.			
Using the NETS-A and NETS-T as a lens, continue to participate in ACES strategic	Director of Technology Services Director of Educational Technology	July, participate in ACES administrators' retreat review of the shared vision of change through the strategic plan. September, report to AITC strategic planning elements related to the technology plan.	AITC agenda notes on review of action plans for technology planning.

Action Plan for Goal Area 3: Teaching			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
plan action teams			
Continue to participate in regional, state, and national advocacy groups for educational technology	• Director of Technology Services • Director of Educational Technology • AITC members	• July, participate in annual ISTE conference. • October, participate in CT state-level CECA/CASL conference. • Quarterly, participate in regional ACES PDSI Technology Council.	• AITC agenda notes on review of materials presented and shared. • AITC members report back to building-level through staff meeting and PLC updates.
Continue to review and suggest digital age resources to meet and exceed learning goals, support effective instructional practices, and maximize performance of district and school leaders.	• AITC members	• Weekly AITC PLC sub-groups meet to review emerging trends. • Monthly, sub-groups report back to AITC with suggested additions or changes.	• AITC agenda notes. • Database of approved resources for teachers.
Continue to monitor CSDE, CAPSS, CABE, and CEN announcements and offerings related to educational technology.	• Director of Technology Services • Director of Educational Technology	• Monthly, review CSDE, CAPSS, CABE, and CEN newsletters and web postings.	• AITC agenda notes. • Number of staff attending workshops or meetings.
Continue to attend ACES district-wide meetings.	• Director of Technology Services • Director of Educational Technology	• Monthly, report on district-wide meeting discussions related to educational technology. • Monthly, report of meetings through PDSI regional councils.	• AITC agenda notes.
Continue to collect and	• AITC	• Monthly, share and discuss emerging trends of evidence-based	• AITC agenda meetings.

Action Plan for Goal Area 3: Teaching			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
share external and internal emerging trends in educational technology.	AITC PLC sub-group	best practices revealed through continuous environmental scanning of internal and external sources of educational technology.	Database log of research articles shared.
Continue to examine building-level instructional needs.	School-level technology planning committees Curriculum Director and Coordinators AITC AITC PLC sub-group	Monthly at each school, continue to discuss learner-centered solutions to enhance personalized learning. Monthly, discuss curriculum integration needs and solutions. Monthly, school-wide walk-throughs and classroom 'sweeps'. Monthly, create e-blasts reminding teachers of available resources and professional learning opportunities.	School-level technology meeting agendas Curriculum department website documents

Goal 4: Infrastructure for Teaching and Learning

National Technology Plan	State Technology Plan
4.0 Infrastructure: Access and Enable *All students and educators will have access to a comprehensive infrastructure for learning, when and where they need it.*	***Goal 4: Infrastructure for Teaching and Learning*** *All students and educators will have access to a comprehensive infrastructure for learning, when and where they need it.*
What will your district do over the life of this local Educational Tech Plan to ensure that all students and educators will have access to a comprehensive infrastructure for teaching and learning?	

Action Plan for Goal Area 4: Infrastructure			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Infrastructure Access			
Ensure students and educators have robust broadband access to the Internet and adequate wireless connectivity both in and out	Technology Services AITC Fiscal School-level technology committees	Monthly, report on connectivity at school-level technology meetings Monthly, continue to monitor and adjust/add wireless access points to all learning or collaborative areas. Monthly, monitor BYOD.	Network usage and speed reports Wireless surveys

Action Plan for Goal Area 4: Infrastructure			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
of school (NETP, 2010, p. 61)			
Ensure that every student and educator has at least one Internet access device and appropriate software and resources for research, multimedia content creation, and collaboration for use in and out of school (NETP, 2010, p. 61).	• Technology Services • AITC • Fiscal • School-level technology committees	• Monthly, report on connectivity issues. • February and May, review plan for equipment end-of-life and annual replacement schedule. • Monthly, report on Help Desk monitoring and preventative maintenance, break-fix, and troubleshooting. • During the budgeting process (October and May), review economies of scale, centralized monitoring and maintenance. • Monthly AITC meetings include technology purchasing processes that include an evaluation guiding end-users in purchasing network level technologies.	• Network usage and speed reports • Wireless surveys • Help Desk reports
Continue to monitor and provide learners with one-to-one and BYOD access.	• Technology Services • AITC • Fiscal • School-level technology committees	• August-September, student one-to-one devices delivered • October, as part of the budget process, discuss potential staff one-to-one. • Monthly, report to AITC BYOD usage and issues. • Monthly, report on Cloud computing • Monthly, report on learning management system (Canvas) implementation	• Student-to-computer ratios • Helpdesk tickets and reports of connectivity
Continue to monitor, support, and upgrade major Information Technology infrastructure items.	• Technology Services • Fiscal	• December-February, review, analyze, and adjust the major system refresh cycle planning document for budgetary planning • Summer and Winter breaks, implement large system upgrades	• Major systems have a planned funding cycle • Unanticipated large expenditures are avoided

Goal 5: Productivity and Efficiency

National Technology Plan	State Technology Plan
5.0 Productivity: Redesign and Transform *At all levels, our education system will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money and staff.*	***Goal 5: Productivity and Efficiency*** *At all levels, our education system will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money and staff.*
What will your district do over the life of this local Educational Tech Plan to maintain or redesign processes and structures to take advantage of the power of technology to improve learning outcomes while maintaining efficiency?	

Action Plan for Goal Area 5: Productivity and Efficiency			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Themes			
Develop and adopt a common definition of productivity in education and more relevant and meaningful measures of outcomes, along with improved policies and technologies for managing costs, including those for procurement (NETS, 2010, p. 74).	AITC	April, annual review of technology-related policies, procedures, and governance documents April, calculation of total cost of ownership (TCO) October, annual budgets reviewed for technology hardware and software October-November, identify potential funding gaps and work with program directors.	Number of documents reviewed Meeting minutes
Ensure economies of scale, centralized monitoring, and maintenance.	Technology Services AITC Building Administrators	October, review centralized software and hardware purchasing through Technology Services. Contact vendors for quantity or combined purchase opportunities. October, re-evaluate enterprise level network software to see if more cost effective options.	Annual recurring software maintenance fees. Software inventory. Hardware inventory

Action Plan for Goal Area 5: Productivity and Efficiency			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
		• June, all end-user computing will be acquired through three year fair market value leases, ensuring computers are no more than three years old. • June, servers and storage devices purchased with a minimum of four years onsite maintenance to ensure maximum uptime and staff/student availability. • June, servers and storage devices more than five years old will be either decommissioned or moved into testing environments and replaced.	
Ensure ACES is ready to apply for grants and e-rate	• Technology Services • Fiscal • Kellogg & Sovereign (e-rate consulting firm)	• December, continue to apply for e-rate program. • As offered, continue to apply for competitive grants as made available.	• E-rate reporting of 470, 471, 472/474 and 486.
If any capital projects are identified, ACES will use all existing protocols to provide evaluation, purchase, and deployment of technology related projects.	• Technology Services • AITC	• Central Office communicates to AITC and TS the need for technology assistance.	• Project budgets. • State guidelines.
Ensure ACES has accurate accounting of total cost of ownership (TCO) for technology needs	• Technology Services • AITC	• September-October, develop TCO formula • January, develop end-of-life (EOL) replacement schedule and plan incorporated into the Destiny Asset Tracking Module	• Total Cost of Ownership (TCO) • EOL records • Inventory reports

Action Plan for Goal Area 5: Productivity and Efficiency			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
When purchasing hardware or software, combine requests from all programs to maximize discount rates.	- Technology Services - AITC	- Monthly, programs and schools will purchase technology through AITC approval process - Monthly, TS will contact vendors on pooled licensing	- TS processing of software purchases - TS vendor list - AITC quick order list - Hardware and software inventory (dependent on Destiny purchases)

Goal 6: R&D: Innovate and Scale

National Technology Plan	State Technology Plan
6.0 R&D: Innovate and Scale The model for learning presented in this plan assumes that we will develop, adopt, and ensure equitable access to a technology-based education system that provides effective learning experiences, assessments, and teaching and a comprehensive infrastructure for learning to support both formal education and all other aspects of learning. It also assumes we will incorporate many of the practices other sectors regularly use to improve productivity and manage costs and will leverage technology to enable or enhance them (NETP, 2010, p. 75).	*There is no state equivalent of this goal.*
What will your district do over the life of this local Educational Technology Plan to ensure continuous scanning and monitoring of internal and external educational technology trends connected to teaching and learning?	

Action Plan for Goal Area 6: R&D Innovate and Scale			
What steps will you take?	**Who will be responsible?**	**When (be specific)**	**How will you measure?**
Continue ongoing environmental scanning of internal and external trends.	Director, Educational Technology Director, Technology Services	Monthly, report on internal and external trends using the credibility, accuracy, reasonableness, and support (CARS) analysis tool	AITC meeting agenda minutes CARS analysis and SWOT report
Continue to use PLC and PLN to monitor local readiness and rollout of educational technology innovation and scale.	Director, Educational Technology Director, Technology Services	Quarterly, participate in regional Technology Council. Weekly, continue themed PLC sub-groups for plan themes.	AITC meeting agenda minutes
Build communication channels for innovation diffusion and reinvention.	Director, Educational Technology Director, Technology Services	Use intranet and building level staff meetings to refresh staff's knowledge of technology resources. Build 'champions' and leaders at the building level.	Number of e-blasts Number of staff meeting presentations on technology
Continue professional learning and evidence-based practices for technology, innovation, and management.	Director, Educational Technology Director, Technology Services	Annually, attend local and national conferences (e.g., CECA, ISTE, AOM, AERA) Monthly, use online courses (e.g. MOOCs, Lynda.com, Google Certification, CoSN CETL (certified educational technology leader)	Report to AITC on conference materials Number of courses completed

CHILDREN'S INTERNET PROTECTION ACT (CIPA) CERTIFICATION

Schools and libraries that plan on receiving E-Rate discounts on Internet access and/or internal connection services after July 1, 2002, must be in compliance with the CIPA. CIPA compliance means that schools and libraries are filtering their Internet services and have implemented formal Internet safety policies (also frequently known as Acceptable Use Policies). Information on the CIPA requirements is located at http://E-Ratecentral.com/CIPA/cipa_policy_primer.pdf.

I, Thomas W. Danehy certify that one of the following conditions (as indicated below) exists in

Name of Superintendent/Director

Area Cooperative Educational Services

LEA

X	My LEA/agency is E-Rate compliant; or
	My LEA/agency is not E-Rate compliant. (Check one additional box below):

X	Every "applicable school*" has complied with the CIPA requirements in subpart 4 of Part D of Title II of the ESEA**.
	Not all "applicable schools*" have yet complied with the requirements in subpart 4 of Part D of Title II of the ESEA**. However, the LEA has received a one-year waiver from the U.S. Secretary of Education under section 2441(b)(2)(C) of the ESEA for those applicable schools not yet in compliance.
	The CIPA requirements in the ESEA do not apply because no funds made available under the program are being used to purchase computers to access the Internet, or to pay for direct costs associated with accessing the Internet, for elementary and secondary schools that do not receive E-Rate services under the Communications Act of 1934, as amended.

*An applicable school is an elementary or secondary school that does *not* receive E-Rate discounts and for which Ed Tech funds are used to purchase computers used to access the Internet, or to pay the direct costs associated with accessing the Internet.
** Codified at 20 U.S.C. § 6777. See also, http://www.ed.gov/legislation/ESEA02/pg37.html

Signature of Superintendent/Executive Director
Thomas W. Danehy

Date

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