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### ESSENTIAL CONDITION ONE: Effective Instructional Uses of Technology Embedded in Standards-Based, Student-Centered Learning

ISTE Definition: Use of information and communication technology (ICT) to facilitate engaging approaches to learning.

### **Guiding Questions:**

- How is technology being used in our school? How frequently is it being used? By whom? For what purposes?
- To what extent is student technology use targeted toward student achievement of the Georgia Learning Standards (GPSs, CCSs)?
- To what extent is student technology use aligned to research-based, best practices that are most likely to support student engagement, deep understanding of content, and transfer of knowledge? Is day-to-day instruction aligned to research-based best practices?

Strengths	Weaknesses	Opportunities	Threats
Technology is used daily to	While technology is used daily,	A technology/curriculum	Ensure professional
integrate technology.	it is not integrated throughout	committee has been formed to	development continues to be in
	the entire day.	meet the demands of a	place to support technology
Georgia Standards of		changing technology	integration.
Excellence are used to target	Research based practices are	integration.	
student achievement of state	not used to support students'		Support for younger students
standards.	deep understanding of content	Technology coach and leaders	on basic computer skills.
	on a day to day basis.	could use professional	
Technology is used to engage,		development days to model	
support learning and deepen		research based practices.	
student understanding.			
Technology is used to meet the			
needs of all diverse learners.			

Summary of Results/Conclusions: Dug Gap Elementary School integrates technology to engage students, support learning, and deepen student understanding and to meet the needs of all diverse learners. Teachers integrate technology with the Georgia Standards of Excellence to target student achievement of state standards. Technology is integrated into daily instruction. A few weaknesses were found with the effective technology usage at Dug Gap. One weakness is that technology is being used everyday, but is not being integrated throughout the entire day. Another weakness is that research based practices are not being used to support students' deep understanding of content on a day to day basis, but research best practices are not being used consistently. The following are also many opportunities for Dug Gap to continue to grow. One opportunity is for the technology team to continue their collaboration to help

with planning and making technology decisions. Additionally, technology coaches and leaders could use professional development days to model research based practices. Potential threats are also essential to understanding the current reality of our school. If professional development isn't available or effective, teachers do not have the proper training to integrate technology effectively, and students may receive low level learning experiences. It is imperative to continue providing porefessional development in the area of technology.

Recommendations from Gap Analysis: According to this current reality, the diagnostic tool and technology survey, there are some recommendations that could support the area of effective teaching. In order for teachers to provide effective instruction, they must have the knowledge to do so. This knowledge is called Technological, Pedagogical, and Content Knowledge (TPACK). Roblyer (2016) explains that TPACK identifies the knowledge teachers need to teach effectively with technology and knowledge that teachers need to increase their technology integration skills. ISTE (2019) provides evidence that effective instructional use of technology leads to student-centered learning that moves students from passive receivers of information to active participants in their own discovery process. ISTE elaborates that student centered learning requires more than technology implementation, but it includes standards based learning that will challenge students to think deeper. With this research teachers should move forward by developing their TPACK and focus on implementing these strategies in their classrooms. Technology integration should focus on true integration that is student centered instead of technology usage.

#### Data Sources:

ISTE Essential Conditions, (2019). Retrieved from

https://www.iste.org/standards/tools-resources/essential-conditions/student-centered-learning

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

Roblyer, M.D. & Doering, A. (2016) Integrating Technology into Teaching, (7th ed). Boston: Pearson.

### **ESSENTIAL CONDITION TWO: Shared Vision**

ISTE Definition: Proactive leadership in developing a shared vision for educational technology among school personnel, students, parents, and the community.

- Is there an official vision for technology use in the district/school? Is it aligned to research-best practices? Is it aligned to state and national visions? Are teachers, administrators, parents, students, and other community members aware of the vision?
- To what extent do teachers, administrators, parents, students, and other community members have a vision for how technology can be used to enhance student learning? What do they <u>believe</u> about technology and what types of technology uses we should

- encourage in the future? Are their visions similar or different? To what extent are their beliefs about these ideal, preferred technology uses in the future aligned to research and best practice?
- To what extent do educators view technology as critical for improving student achievement of the GPS/CCSs? To preparing tomorrow's workforce? For motivating digital-age learners?
- What strategies have been deployed to date to create a research-based shared vision?
- What needs to be done to achieve broad-scale adoption of a research-based vision for technology use that is likely to lead to improved student achievement?

Strengths	Weaknesses	Opportunities	Threats
There is a specific five year	No strategies have been		Few teacher voices may cause
plan for technology in the	deployed to create researched	Include many more staff	a shift in the decision making
district.	based shared vision.	members in the development of the shared vision.	and goals for the shared vision.
The school has a technology			Without the support of the
plan that is aligned to the		Community members are not	community, the school may
district plan. Plan is reviewed		fully involved in the	lack connections for funding,
yearly.		development of the shared	knowledge and opportunities
		vision.	for students.
Some technology leaders have			
a vision to enhance student			
learning.			
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Most educators believe that			
technology is critical for improving student achievement			
and can't imagine themselves			
without technology.			
without technology.			
Educators believe that various			
types of technologies should be			
used to engage students.			

**Summary of Results/Conclusions:** Shared vision is an area that is strong for Dug gap Elementary. Although the Lead and Transform Diagnostic Tool shows a low percentage, Dug Gap has a technology plan that is aligned to the 5 year technology plan the district has. Teachers are key when it comes to the decision making of the school's technology plan. A selected teacher team is chosen each year to collaborate with the media specialist, technology representative for the district and administration to ensure the school vision aligns to that of the district.

**Recommendations from Gap Analysis:** According to ISTE, "A shared vision serves as the driving force behind a technology implementation (2019). Without a vision the school has no direction for technology usage. This gives stakeholders the opportunity to use technology in various ways, in which some may not be researched based. A shared vision should be created that involves all stakeholders (administrators, technology leaders, teachers, community partners). This plan should begin to include community partners and parents if needed.

#### Data Sources:

ISTE Essential Conditions, (2017). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/shared-vision">https://id.iste.org/standards/essential-conditions/shared-vision</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

### **ESSENTIAL CONDITION THREE: Planning for Technology**

ISTE Definition: A systematic plan aligned with a shared vision for school effectiveness and student learning through the infusion of ICT and digital learning resources.

- *Is there an adequate plan to guide technology use in your school? (either at the district or school level? Integrated into SIP?)*
- What should be done to strengthen planning?
- In what ways does your school address the needs of diverse populations in the school or district to include how race, gender, socio-economic, and geographic diversity giving consideration to how these factors commonly affect K-12 students' access to school and beyond-school access to high-speed Internet, modern computing devices, software, knowledgeable technology mentors, culturally-relevant digital content, and other affordances critical to technology literacy acquisition.

Strengths	Weaknesses	Opportunities	Threats
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There is a clear written	There is no technology	Begin communication with	Diverse population will not be
plan at the district level.	support for students to use	business partners and Comcast to	addressed beyond school access,
	outside of school.	offer affordable high speed	which will lead to bigger
There is a clear plan at the		internet to families.	achievement gaps.
school level	Current Chromebooks have		
	slowly started to have	Create short term and long term	
The principal has a plan to	problems	goals for technology use.	Limited funds will prevent the
equip primary grade			school from maintaining current
students with 1:1	Current private donor for	Work with community leaders and	technology available in the school.
Chromebooks.	technology will no longer	partners to meet the needs of	
	offer as much financial	diverse population in relation to	
There is an expectation	support to the school	technology	
that teachers use available			
technology daily.		Find grants to help cover	
		technology maintenance and to	
		purchase new technology tools.	

**Summary of Results/Conclusions:** This area was an "approaching" area on the diagnostic tool analysis. The district has a clear written plan, and the principal of Dug Gap along with the committee have a completed technology plan that aligns to the district's. The principal has a plan that is currently being implemented to equip primary grade students with 1:1 Chromebooks. There is a clear expectation for teachers to know the importance of using the available technology on daily basis.

Recommendations from Gap Analysis: This area needs small detailed improvements in order to move to the "meets" area on the diagnostics tool analysis. ISTE (2019) explains that, "Implementation planning lays the foundation for technology deployment... It guides the manifestation of your shared vision". It is very important for the plan to be aligned with the shared vision. It is also recommended that the plan details how to address students of various diversities such as race, gender, socio-economic, and geographical. Morphew, (2012) suggests that culturally responsive teaching provides a group of diverse students access or entry into the technology world. Using student's strengths and available resources is Morphew's advice to address students with low socioeconomic status and learning styles (2012). Morphew explain that students may not have access to updated technology or internet access but they do have access to technologies such as remotes and television, so teachers are responsible for helping students make connection between various types of technologies, which will transfer to technologies within the classroom (2012). It is also recommended that at least one school wide technology coach be hired to help teacher address the needs of different groups.

#### Data Sources:

Morphew, V. N. (2012). A Constructivist Approach to the National Educational Technology Standards for Teachers. Eugene, Oregon: International Society for Technology in Education [ISTE].

ISTE Essential Conditions, (2017). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/implementation-planning">https://id.iste.org/standards/essential-conditions/implementation-planning</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results) Responses from the Survey Instrument (Created by Angelica Garcia, Results)

#### ESSENTIAL CONDITION FOUR: Equitable Access (Specifically Low SES and gender groups)

ISTE Definition: Robust and reliable access to current and emerging technologies and digital resources.

#### **Guiding Questions:**

- To what extent do students, teachers, administrators, and parents have access to computers and digital resources necessary to support engaging, standards-based, student-centered learning?
- To what extent is technology arrange/distributed to maximize access for engaging, standards-based, student-centered learning?
- What tools are needed and why?
- To what extent are strategies needed to address equity issues among Low SES and gender groups? What are examples of strategies that would benefit your school/district? (required)

• Do students/parents/community need/have beyond school access to support the shared vision for learning?

Do students/parents/community need/new ocyona school access to support the shared vision for tearning.			
Strengths	Weaknesses	Opportunities	Threats
There are various sources of	Strategies addressing equity	Professional development for	Females students will continue
technologies available during	issues among Low SES and	teachers to gain strategies to	to fall behind their male
school hours.	gender groups are not present	cater to the needs of low SES	counterparts in technology
	at this time.	and gender groups.	related areas.
Upper grades (3-5) are			
equipped with Chromebooks,	Not all students have access to	Create a system wide wifi	Funding for professional
and more accessible	technology at home.	infrastructure that will enable	development
technologies such as ipads and		families to gain access for free	
tablets are distributed to lower		while at home.	Students not having the
grades (K-2).			necessary internet at home may
			cause the gap to stretch.

	Teachers motivation to receive and implement new strategies.

Summary of Results/Conclusions: This area was an "meeting" area on the diagnostic tool analysis and the highest ranked area within the analysis. According to the survey, 71% of teachers believed that they had reliable access to current and emerging technologies and digital resources. There are various sources of technologies available during school hours. Technologies are also distributed to age appropriate students, such as chromebooks are distributed to upper grades (3-5), and more accessible technologies such as ipads and tablets are distributed to lower grades (K-2). The weaknesses related to this standard involves access to technologies and internet outside of school. The district has a technology take home program for middle and high school students, so there are obvious opportunities to improve this standard even more.

Recommendations from Gap Analysis: While this standard is within the "meeting" guidelines, there are still areas of improvements. The weaknesses related to this standard involves access to technologies and internet outside of school. According to ISTE (2019), equity access is the a bridge for socioeconomic gaps. Equity access also supports all students and their access to internet and technologies ISTE (2019). One recommendation is to create a plan that will generate funding to create a system wide wifi infrastructure that will enable families to gain access for free while at home. This type plan involve relationship with community leaders and partners. A final recommendation would be to integrate the Science Technology Engineering and Math program within the district or school to encourage girls to be more involved with technology related fields.

#### Data Sources:

ISTE Essential Conditions, (2017). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/equitable-access">https://id.iste.org/standards/essential-conditions/equitable-access</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results) Responses from the Survey Instrument (Created by Angelica Garcia, Results)

#### **ESSENTIAL CONDITION FIVE: Skilled Personnel**

ISTE Definition: Educators and support staff skilled in the use of ICT appropriate for their job responsibilities.

- To what extent are educators and support staff skilled in the use of technology appropriate for their job responsibilities?
- What do they currently know and are able to do?
- What are knowledge and skills do they need to acquire?

(Note: No need to discuss professional learning here. Discuss knowledge and skills. This is your needs assessment for professional learning. The essential conditions focus on "personnel," which includes administrators, staff, technology specialists, and teachers. However, in this limited project, you may be wise to focus primarily or even solely on teachers; although you may choose to address the proficiency of other educators/staff IF the need is critical. You must include an assessment of teacher proficiencies.)

Strengths	Weaknesses	Opportunities	Threats
70% of participants within the	Teachers do not have the skills	Teachers would like to see	Teachers not being open
survey believed that most	to fully integrate technology	more development that	minded about acquiring skills
educators are equipped with the	effectively.	includes technology equipment	to effectively integrate
necessary skills to effectively		and specifically Google	technology.
use digital technologies to	Not all teachers are using	Classroom.	
enhance instruction.	always or often using		Ineffective usage of technology
	technology.	Modeling within classroom to	that hinders student
Teachers understand that		help foster the need and	achievement.
technology is an integral part of		strategies for consistent use of	
21st century learning in order		technology.	
enhance student learning.			
70% of participants within the			
survey always integrate			
technology within their			
classrooms.			

Summary of Results/Conclusions: It is essential for teachers to have the skills needed to integrate technology effectively. This standard is considered to be in the meeting stage, according to the diagnostic tool results. Teachers that participated in the survey believed that most educators were equipped with the skills to effectively use technology to enhance instruction. A weakness is that not all teachers have the skills needed to fully integrate technology effectively. There are many threats that could be detrimental to students. If teachers aren't open-minded about acquiring the needed skills then they may opt out of trainings that may lead to ineffective usage of technology a hindrance to student achievement.

**Recommendations from Gap Analysis:** This is one of the most essential standards within a school setting, because teachers are those who deliver information and online tools learned to students. They must set up the learning atmosphere for students. "The success of any technology initiative depends on seeing results. Increased student engagement, for example, can happen only if teachers and staff

are also engaged and invested in the transition to a standards-ready system" (ISTE, 2019). By having more interaction with technology integration, teachers may understand the need for more skilled usage of technology integration. It is recommended that more skilled integration leaders be hired to model the skills needed to effectively integrate technology.

#### Data Sources:

ISTE Essential Conditions, (2019). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/skilled-personnel">https://id.iste.org/standards/essential-conditions/skilled-personnel</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

### **ESSENTIAL CONDITION SIX: Ongoing Professional Learning**

ISTE Definition: Technology-related professional learning plans and opportunities with dedicated time to practice and share ideas.

#### **Guiding Questions:**

- What professional learning opportunities are available to educators? Are they well-attended? Why or why not?
- Are the current professional learning opportunities matched to the knowledge and skills educators need to acquire? (see Skilled Personnel)
- Do professional learning opportunities reflect the national standards for professional learning (NSDC/Learning Forward)?
- *Do educators have both formal and informal opportunities to learn?*
- Is technology-related professional learning integrated into all professional learning opportunities or isolated as a separate topic?

• How must professional learning improve/change in order to achieve the shared vision?

Strengths	Weaknesses	Opportunities	Threats
There are some of the professional development opportunities provided by the district and the school	The professional development provided for technology just started this school year.	Provide professional development that meets the wants and needs of the staff members in the long term.	Teachers may not acquire the proper skills.  Lower level use of technology.
		Hire instructional technology coach to provide ongoing professional development for the school.	

**Summary of Results/Conclusions:** Ongoing professional development is essential part of technology integration. Although this standard is at the meeting stage in the diagnostic tool, the development for technology specifically began this school year in our school. There is ongoing professional development going on within the school and district, but the majority of the the opportunities are not related to technology integration.

Recommendations from Gap Analysis: The biggest recommendation within this area is providing staff members the opportunity to learn more and refine their skills related technology integration. Ongoing professional development allows teachers to stay up to date with the most current skills and strategies that should evident in classrooms. ISTE (2019) explains that teachers need time to implement and practice the strategies learned during professional development. It is recommended that instructional technology coaches are hired to provide ongoing professional development. Although a coach is already offering professional development, this coaching should continue in order to ensure teachers are staying up to date with technology. Additionally, the coaches should visit classroom to evaluate the strategies and provide meaningful feedback to teachers. Online courses may also be a recommendation to ensure teachers are receiving professional development in technology.

#### Data Sources:

ISTE Essential Conditions, (2019). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/ongoing-professional-learning">https://id.iste.org/standards/essential-conditions/ongoing-professional-learning</a> ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

#### **ESSENTIAL CONDITION SEVEN: Technical Support**

ISTE Definition: Consistent and reliable assistance for maintaining, renewing, and using ICT and digital resources.

- *To what extent is available equipment operable and reliable for instruction?*
- Is there tech assistance available for technical issues when they arise? How responsive is tech support? Are current "down time" averages acceptable?
- Is tech support knowledgeable? What training might they need?
- In addition to break/fix issues, are support staff available to help with <u>instructional</u> issues when teachers try to use technology in the classroom?

Strengths	Weaknesses	Opportunities	Threats

Technical Support is sometimes available for	There is only one technical support personnel person on	Hire instructional technology coaches to provide support	Teachers may be hesitant to continually use technology if
teachers.	site for multiple schools.	with technical support related	instructional support isn't
		technology usage and	provided.
Technologies are quickly	Technical support is only	resources.	
replaced when damaged, unless	available for Dug Gap on		
the damage is critical.	Tuesdays.	Hire additional technical	
		support that can be housed at	
	Technical support is geared	each school in the district or	
	towards the technologies not	that can be shared with another	
	issues with resources.	school, not multiple ones.	

Summary of Results/Conclusions: Technology must be working properly in order for teachers and students to use it on a daily basis. Technical support is a standard that is at a meeting category of the diagnostic tool. However, the reality is that at Dug Gap, technical support is only available for Dug Gap on Tuesdays. If the issue is not critical, then the media specialist comes to assist the problem. When technology is damaged it is quickly fixed or replaced, unless the damage is critical. One weakness support for teachers who have issues with instructional resources. Teachers have to go online to find fixes for issues that arise. This type problem could lead to teachers becoming hesitant about using technology if they don't receive the support that they want and need. Another weakness is not having a tech support person that is always on call for any type of technological issues.

**Recommendations from Gap Analysis:** It is recommended that a instructional technology coach is hired to provide support with instructional support related technology usage and resources within the classroom. ISTE (2019), explained that technical support needs to be consistent and reliable in order to make a true difference. Technical supporters also must be knowledge and able to meet the needs of all staff members.

#### Data Sources:

ISTE Essential Conditions, (2019). Retrieved from https://id.iste.org/standards/essential-conditions/technical-support

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

ISTE Definition: Content standards and related digital curriculum resources.

### **Guiding Questions:**

- To what extent are educators, students, and parents aware of student technology standards? (ISTE Standards for Students)
- Are technology standards aligned to content standards to help teachers integrate technology skills into day-to-day instruction and not teach technology as a separate subject?
- To what extent are there digital curriculum resources available to teachers so that they can integrate technology into the GPS/CCS as appropriate?
- How is student technology literacy assessed?

Strengths	Weaknesses	Opportunities	Threats
Georgia has done a great job of	Student technology literacy is	Teachers can use resources	Teacher will not teacher
integrating ISTE standards into	not being formally taught or	provided by the state	components to the technology
our state standards.	assessed.	department.	standards.
There is an array of digital resources available for teacher to access and integrate	Teachers are unaware of the integration standards organized by the state department.	Intentional planning to include skills from the ISTE standards into lessons.	Teachers are unaware of technology standards.
instruction.			Parents are unaware of
		Technology literacy will be	technology standards.
		taught at the beginning of the	
		year.	

Summary of Results/Conclusions: Curriculum Framework is out of the control of school building personnel, but it is important for staff and administrators to be advocates for curriculum at the state level. Strengths include the technology standards that were adopted from ISTE and transformed to technology standards for Georgia. Georgia also did a great job providing resources for each standard for teachers. Some issues include students technology literacy not being formally taught or assessed. Teachers are also unaware of the integration standards organized by the state department.

**Recommendations from Gap Analysis:** "Technology is best able to enhance learning when educators use it intentionally within the adopted curriculum" (ISTE, 2019). Georgia educators have an array of resources available to help integrate the technology standards. It is recommended that building leaders and technology leaders share the resources with teachers so that they can use them. It is also important for teachers to teach technology literacy formally in classrooms. Teaching technology literacy will allow students to gain full knowledge of technology integration. Leaders, teachers, students and parents also need more interaction with technology standards. In order to ensure all stakeholders are aware of technology standards, schools must take the time to integrate the standards into assessments and progress reports. Technology standards should be given the same attention as our regular curriculum standards.

Schools must also take the time to find ways to inform parents on these technology standards, prior to including them into the progress reports.

### Data Sources:

ISTE Essential Conditions, (2019). Retrieved from <a href="https://id.iste.org/standards/essential-conditions/curriculum-framework">https://id.iste.org/standards/essential-conditions/curriculum-framework</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

Responses from the Survey Instrument (Created by Angelica Garcia, Results)

#### References

Morphew, V. N. (2012). A Constructivist Approach to the National Educational Technology Standards for Teachers. Eugene, Oregon: International Society for Technology in Education [ISTE].

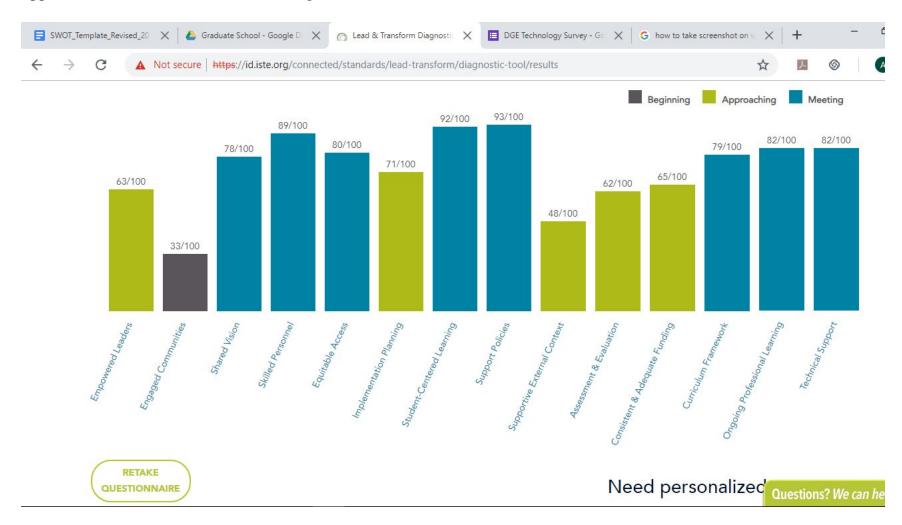
ISTE Essential Conditions, (2019). Retrieved from <a href="https://www.iste.org/standards/tools-resources/essential-conditions">https://www.iste.org/standards/tools-resources/essential-conditions</a>

ISTE Lead and Transform Diagnostic Tool (See Appendix A for results)

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Roblyer, M.D. & Doering, A. (2016) Integrating Technology into Teaching, (7th ed). Boston: Pearson.

Appendix A: ISTE Lead and Transform Diagnostic Tool



**Appendix B:** Essential Condition Survey

Survey Responses