Name: Sarah Barnett ITEC 7410, Semester: Summer 2014

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.

- 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, QCCs)?
- 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? (See Creighton Chapters 5, 7)

 At the end of the school year, 58% of teachers used technology at least 1-2 times each week for student-centered learning of the school year, only 48% of teachers used technology at least 1-2 times each week for student-centered learning of the school year, only 48% of teachers used technology at least 1-2 times each week for student-centered learning activities (Barnett, 2014). A Technology Focus team has been created to identify needed resources, measure impact on student achievement, and provide professional learning to other teachers. Most teachers (68%) still use technology for low-level activities, such as using calculators, dictionaries, and clocks. Only 21% use technology for peer collaboration (Barnett, 2014). The principal is willing to pay for teachers to attend 	Threats
 73% of teachers allow students to search the Internet for information, and 46% have students use computers to create original products such as documents, spreadsheets, (Barnett, 2014). Approximately 50% of teachers to attend technology-related conferences. Some students will participate in a pilot Personalized Learning Academy (tech-centric) 	 Scores on the Coordinate Algebra, Analytic Geometry, and Biology EOCTs are very low. These teachers feel much pressure to raise test scores. Some teachers are still resistant to technology. One survey response was: "I'm just not convinced that technology helps students more than it harms them." Many teachers are unsure how to facilitate constructivist-learning lessons (Barnett, 2014). Not all teachers have the technology they would like in their classrooms.
and presentations (Barnett, 2014). during the 2014-2015 school year.	The laptop carts sustain much abuse and many

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 Teachers are provided with 	advanced computer usage		computers are broken by
laptops to facilitate	and seem to lack some 21 st		the end of the year.
instruction.	century skills.		, , , , , , , , , , , , , , , , , , , ,
	SWD and ELL students do		
ividity teachers use			
SMARTboards,	not have as much access to		
ActivBoards, ActivSlates,	technology.		
electronic clicker systems,	• The school does not have a		
and document cameras to	school-level instructional		
engage students in CCGPS-	technology coach and must		
aligned lessons.	share a district level		
• Teachers use technology as	instructional technology		
components of	coordinator with		
differentiations and flexible	approximately 10 other		
	schools.		
grouping to provide	Schools.		
students with remediation,			
instruction, and enrichment.			
 Teachers have access to 4 			
computer labs and 10			
laptops carts for check-out.			
The labs and carts are			
usually fully scheduled.			
A BYOD policy and			
wireless network allow			
students to use their			
electronic devices in the			
classroom.			

Summary/Gap Analysis:

Technology has become prevalent at Woodland High School in recent years. The school has purchased numerous technologies and students have embraced a BYOD policy and wireless network. Most teachers are trying to implement technology at least on a weekly basis, and frequent use of the mobile laptop carts reveals that teachers are allowing students to use computers to complete various tasks. Teachers are trying to use technology to engage their students and enhance the learning experience, and recent teacher-led professional development sessions reveal creative ways teachers are using technology to promote collaboration and differentiation. The principal is very interested in technology and willing to pay for teachers to attend professional learning outside of the school if they are interested. Also, a new Personalized Learning program will pilot next year and will rely heavily on use of Edgenuity, an online learning platform for students. Thus, there are many opportunities for technology growth in the future.

Still, in several academic departments, all teachers have interactive whiteboards or document cameras, while some departments still seem underfunded for technology, such as foreign language. Most especially, the special education department does not have a prominent voice on the Technology Focus Team so special education technology resources are scant. Those teachers who do have technology often focus heavily on lower-level skills with technology or teacher-centered lessons, placing more emphasis on actually using the technology than on transforming the learning experience with the technology. Similarly, teachers who are resistant to technology, internal and external pressure to increase test scores, and student misbehavior with technology threaten the use of technology at the school. Many teachers also find that technology lessons take longer to implement because students do not have the technology skills necessary to complete even basic computer tasks.

Teachers need training about technology standards (NETS-S and NETS-T) and how to align content lessons with technology standards in order to facilitate content knowledge and technology literacy. Perhaps the creation of a 21st century skills assessment would provide teachers with the motivation necessary to ensure their students develop technology literacy. Similarly, professional development should not focus solely on how to operate equipment, but instead on how to design technology-enhanced lessons that support student engagement and deep understanding of content. Professional development should be evaluated and include follow-up and teacher observations.

Data Sources:

Barnett (2014) conducted a survey for the Technology Focus Team in April 2014. These results were also used as part of an action research project completed as part of requirements for EDRS 8900 at Kennesaw University. The survey is included as Appendix A.

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools.

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/QCCs? 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?

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technology in the	Few teachers have the	with the new trends in
classroom.	training necessary to	technology and, in the
 Administrators, students, 	facilitate the creation of a	midst of changing standards
and most teachers at the	school vision for	and new standardized tests,
school have embraced	technology.	abandon technology for
BYOD.	The technology component	teaching methods that are
 Teachers recognize 	of the School Improvement	safe and familiar.
technology as a trend in	Plan is not aligned to	SWAY WAR TWANTANTA
<u> </u>		
education and know they	national technology	
must become familiar in	standards.	
order to be successful in the		
future.		
 Technology is addressed in 		
the School Improvement		
Plan (SIP, 2014). School		
goals are to increase teacher		
access to resources and to		
identify needs and provide		
professional learning		
related to technology.		

Summary/Gap Analysis:

If Henry County Schools has a vision for technology it is not well-communicated with education stakeholders. Moreover, Woodland High School does not have a specific vision for technology separate from the school vision. Most teachers, however, do believe that technology is a growing trend in education that will benefit students, but the understanding of how technology should be used in the classroom differs. Many teachers still use technology for drill and practice activities, rather than as a component of a student-centered learning environment. Most teachers do agree that technology skills will be needed to be successful after school, but without a measure of 21st century skills or clear district and school alignment with technology standards, it is difficult to assess students' technology literacy.

The school does have a Technology Focus Team in place, which helps to demonstrate the school's commitment to technology. Similarly, technology is a component of the school improvement plan. In the future, the Technology Focus Team should be leveraged to facilitate the creation of a school-wide vision for technology. The Focus Team could gather input from teachers, administrators, students, parents, and community leaders to craft a shared vision for technology that would guide future technology plans. A school-level technology coach may be an even more effective leader for creating a shared vision for technology. Moreover, the district needs to make widespread clarification of how technology will influence personalized learning so that teachers do not think the district's

vision for technology is as a replacement to highly qualified teachers.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools.

Woodland High School: School Improvement Plan 2014-2015. (2014). Stockbridge, GA: Henry County Schools.

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?

technology plan to implement during the next school year. The technology plan is integrated into the School Improvement Plan (SIP, 2014). Technology integration will be a key standard that evaluators look for during observations during the next school year. Teachers will need to document technology integration in their lesson plans. Teachers collaborate bi- planning and implementation. planning and implementation. The technology plan is on aligned to a school or district vision for technology. Some teachers want to only use USA Test Prep (drill/practice website) as their form of technology integration in their lesson plans. Teachers collaborate bi- planning and implementation. The technology plan is not aligned to a school or district vision for technology integration of district vision for technology. Some teachers want to only use USA Test Prep (drill/practice website) as their form of technology integration (Barnett, 2014). The technology plan is not aligned to a school or district vision for technology. Some teachers want to only use USA Test Prep (drill/practice website) as their form of technology integration (Barnett, 2014). The School Improvement Plan (SIP, 2014) includes acquisition of technology and needed professional development, but does not technology Focus	Strengths	Weaknesses	Opportunities	Threats
weekly to create lesson plans and common assessments, many of which incorporate technology.include monitoring student progress, engaging students, preparing students for college/career, or acquiring specificteam could lead the planning process since it comprises members from all the major departments.team could lead the planning process since it comprises members from all the major departments.Technology implementation	 The Technology Focus Team at Woodland High School has created a technology plan to implement during the next school year. The technology plan is integrated into the School Improvement Plan (SIP, 2014). Technology integration will be a key standard that evaluators look for during observations during the next school year. Teachers will need to document technology integration in their lesson plans. Teachers collaborate bi- weekly to create lesson plans and common assessments, many of which incorporate 	 The school does not have a school-level technology coach to guide technology planning and implementation. The technology plan is not aligned to a school or district vision for technology. Some teachers want to only use USA Test Prep (drill/practice website) as their form of technology integration (Barnett, 2014). The School Improvement Plan (SIP, 2014) includes acquisition of technology and needed professional development, but does not include monitoring student progress, engaging students, preparing students for college/career, or 	 Collaborative planning would provide an ideal time for strengthening technology planning. The collaborative computer drive (the T:Drive) would present a good location to store tutorials and videos instructing teachers in some basic technology integration. BYOD could be more successfully implemented with professional learning for teachers about how to use mobile devices to facilitate standards-based lessons (Barnett, 2014). The Technology Focus team could lead the planning process since it comprises members from all the major departments. 	 The district technology vision is not easily accessible or is non-existent and so cannot be used to align school-wide visions. Some teachers lack the confidence or skills to plan for technology in the classroom (Barnett, 2014). Teachers are not aware of research-based practices related to technology integration in the

technology to improve student-learning outcomes. The Technology Focus Team should lead program evaluation and data
analysis.

Summary/Gap Analysis:

While the School Improvement Plan (SIP, 2014) does address technology implementation, the focus is mainly on acquisition of resources and professional development, not necessarily connected with student learning outcomes. One of the major problems is that the district does not have an accessible vision for technology, nor does the school have a specific technology vision to guide technology planning. It is wise that the school integrates technology into the school improvement plan, but the focus should be connected more closely with student achievement, not simply teacher actions.

Since the school does not have a technology coach, the Technology Focus Team would be a good starting point for creating a school wide vision and technology plan. The plan should have specific goals, benchmarks to assess progress, and specific timelines. Professional development for teachers should continue to be included, but follow-ups and program evaluation should be conducted to ensure all teachers develop a shared understanding of what technology implementation entails and continue to plan for technology integration. The Technology Focus Team would be integral in ensuring that teachers use technology more frequently.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools. *Woodland High School: School Improvement Plan 2014-2015*. (2014). Stockbridge, GA: Henry County Schools.

ESSENTIAL CONDITION FOUR: Equitable Access

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

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

	 Do students/parents/comp 	nunity need/have beyond school a	access to support the vision for lear	rning?
	Strengths	Weaknesses	Opportunities	Threats
•	Students have access to computers in the school library before and after school, as well as during study hall and lunch. Teachers can reserve one of four computer labs or check out one of ten laptop computer carts containing 30 laptops each.	 Some departments have had to fund technology purchases themselves, while the school has purchased technology for other departments. Foreign Language, special education, and music do not have the technology resources they would like. 	to bring their own technology and use it throughout their classes as appropriate, before/after school, and during study hall.	 Some teachers are less aware of the types of technologies available and so do not know what to ask for. Some technologies, such as iPads, are unavailable because of the cost. There is no evaluation to determine if teachers are
•	Parents and students have access to grades at home through the Internet. Most teachers have the technology (interactive whiteboards, document cameras, etc.) they have requested, though the same devices are not found in each room. 47% of teachers disagree that students without their	 Some students do not have computer access at home, making it difficult to achieve complete technology integration of a specific class. The laptop carts and computer labs can be difficult to reserve at certain times in the school year. The laptop carts have some 	Since many teachers have their own technology in the classroom, the demand for the media center technology is not great. One of the goals of the Technology Focus Team during the next school year is to pursue grants to secure more technology. The Technology Focus Team serves as a screening	using the technology they have requested or if the technology is being used to support standards-based, student-centered learning. The arrangement of computer lab cannot be changed and is not suitable for collaborative activities.

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own personal devices	connectivity issues with the	committee for technology	
prevents the teacher from	wireless network (Barnett,	purchase requests before	
using technology in the	2014).	they go to the principal.	
classroom while only 32%	It is difficult for teachers		
agree (Barnett, 2014).	and students to print in the		
	building. Printers are not		
	allowed in teacher		
	classrooms; only network		
	printers are allowed in		
	teacher workrooms.		
	Students must pay to print.		
	• Each teacher classroom		
	used to be equipped with a		
	student computer, but those		
	have been removed.		
	Not all students use		
	technology for tasks that		
	are student-centered		
	engaging, or require higher-		
	order thinking.		
	The public library has cut		
	hours because of decreased		
	budgets. The library is no		
	longer open on weekend		
	and is only open after		
	school hours two days		
	during Monday-Thursday.		

Summary/Gap Analysis:

All students have equal access to school-owned resources during the day, though teachers in certain academic departments have greater technology access than others. The Technology Focus Team needs to investigate and seek to equalize the amount of money departments are asked to spend on technology and the amount of money the school provides, since this is not equal in all departments. Also, the Technology Focus team should pay special attention to securing technology resources needed by the Special Education department since SWD continue to be one of the lowest scoring subgroups on standardized tests; differentiated, technology-enhanced instruction could help students master standards. Special Education teachers need to receive technology training so that they understand how to use technology to accommodate for students' learning disabilities.

Not all students have personal electronic devices to bring for BYOD, but teachers can check out individual laptops, rather than an entire cart, for students who do not have a personal device but may need it in a specific class. Likewise, there are numerous resources teachers may check out if the technology is not already housed in their rooms; some devices are checked out more frequently than others. Still, the media center and Technology Focus Team need to be more proactive about letting teachers know what types of devices are available for checkout in order to increase teacher use of these devices.

A significant number of students do not have computer or Internet access at home, which makes it difficult to fully implement flipped classroom initiatives since many of these students also ride the bus and do not arrive at school early enough or stay late enough to use school resources to complete assignments. The public library system has cut operation hours and so is now opened after school hours only two days a week, and only for a few hours. The school may consider ways to expand operating hours to provide students and parents with more time in the evenings to use technology resources. Similarly the district may consider initiatives to provide low-income families with computers at discounted prices through partnerships with local businesses.

Attention also needs to be placed on monitoring whether teachers who have school-owned technology are using it for student-centered, engaging, and meaningful tasks in order to ensure that students have equitable access to quality technology education. Some teachers use technology to foster higher-order thinking skills, while others relay on technology as a reward system or for drill/practice type software. All students should expect to receive the same quality of learning using technology, no matter the teacher.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools.

ESSENTIAL CONDITION FIVE: Skilled Personnel

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

Guiding Questions:

- 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	<i>Opportunities</i>	Threats
• Survey results revealed that teachers felt more prepared to integrate technology into their classrooms at the end of the year (Barnett, 2014).	Teachers do not know how to use technology for anything other that re- creating traditional, teacher- centered lessons.	The Technology Focus Team has created a webpage on the school site that houses examples of teacher-created technology	Some teachers are unfamiliar with technology for personal use and so have a severe learning disadvantage when it comes
Most staff members are proficient in word processing, PowerPoint, email, and using the Internet.	Teachers do not know how to troubleshoot technology problems, and so often avoid technology altogether.	lessons and a calendar of when focus team members will be implementing specific technologies so that teachers can come observe.	 to learning technology for school use. Professional learning only happens during teacher's planning periods to make
 Teachers are proficient entering grades and recording attendance using Infinite Campus, the online grading portal. Most teachers are proficient updating their school websites. 	 The technology proficiency requirement for teaching certification is outdated and insufficient. Teachers are not aware of the NETS-T standards. 	 Based on survey results, the Technology Focus Team will be adding screencasts and tutorials next school year to provide teachers with just-in-time technology instruction (Barnett, 2014). POINT, the school's data 	the most use of the instructional day and not require teachers to come early or stay late. Sometimes 50 minutes is not long enough for adequate instruction and follow-up is desperately needed (Barnett, 2014).
		management system, can	Teacher attitudes to

	 accomplish many data analysis tasks, and POINT training is an initiative for next school year. At the end of the year 47% of teachers still indicated that they were only somewhat prepared to integrate technology into their classrooms (as opposed to adequately prepared), and 3% were not prepared. technology training are often negative simply because of the timing of training sessions. It is difficult to implement new technology initiatives during the school year because teachers are already so busy planning curriculum.
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Summary/Gap Analysis:

The range of technology skills of teachers is great; some teachers are limited to entering grades and sending emails, while others are able to facilitate student-centered lessons using innovative technologies. What is concerning, though, is that teachers at Woodland are largely not aware of the NETS-T technology standards for teachers or the NETS-S technology standards for students. Although Georgia requires teachers to demonstrate computer proficiency to earn a teaching certificate, the requirements are very minimal and inadequate to use many of the new, innovative technologies. The school is also comprised of a significant portion of older teachers who do not use technology for personal uses outside of school; it is difficult therefore to teach them certain technology strategies because they do not have some basic skills or know certain computer terminology. All staff could use additional professional learning related to using technology to create student-centered, authentic, and collaborative learning experiences, not simply on how to operate technology devices.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools.

ESSENTIAL CONDITION SIX: Ongoing Professional Learning

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

- 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)?
- 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 various	The school does not have a	Part of the Technology	Of the themes that arose
workshops provided on the	Technology Coach to	Focus Team's survey	from qualitative data
county professional	provide follow-up and	administered at the end of	analysis, the need for
learning website related to	continuous professional	the year related to	"time" was very strong
general teaching and	learning support.	professional learning	(Barnett, 2014). However,
learning best practices.	Professional learning	options. The survey	it is difficult to find any
• District level instructional	opportunities are not	revealed that teachers	more time during the school
technology specialists are	directly aligned to national	would like professional	day (other than 1 planning
willing to conduct	standards.	learning opportunities in the	period each day) to allow
specialized training at the	• There are few opportunities	following categories:	teachers out of the
school level upon request.	to work with an	sessions designed for	classroom for ongoing
The Technology Focus	instructional technology	teachers in specific	professional learning.
Team is in charge of 4 of 10	coordinator one-to-one.	departments, differentiated	Professional learning
monthly professional		sessions for beginning,	sessions occur one time
learning sessions at the		intermediate, and advanced	each month during
school; topics for these		users, multiple options for	teachers' planning periods;
sessions are determined by		sessions on a specific day,	other planning period
a survey administered at the		sessions offered at times	meetings include grade-
beginning of the year.		other than planning periods,	level/subject-specific
• 51% of teachers chose the		specific times for follow-up	collaborative planning

following option related to
the helpfulness of
professional learning:
"Helpful, but I did not get
to use many of the tools in
the classroom this year"
(Barnett, 2014).

• 39% of teachers chose the survey option related to professional learning: "Helpful, and I got to use some of the tools this year" (Barnett, 2014).

after professional learning, observing teachers using different types of technology, online tutorials or videos of teachers demonstrating how to use certain type of technology, and specific examples of how other teachers are using technology in the classroom (Barnett, 2014). The Technology Focus Team will try to incorporate as many of these suggestions as possible into professional learning sessions during the coming school year.

- Of the themes that arose from qualitative data analysis, the need for "training" was dominant (Barnett, 2014).
- The principal is willing to pay for teachers to attend technology-related professional learning opportunities outside the school.

meetings (sometimes multiple preps for a single teacher) and department meetings.

- Technology related professional learning sessions are generally taught in isolation without direct application of skills. This is an ineffective professional learning method (Knight, 2007).
- Because professional learning always occurs during a teacher's planning time in the middle of the school day, teachers are often distracted by classroom issues or present poor attitudes because they would rather be working in their classrooms.

Summary/Gap Analysis:

There are many opportunities for professional learning at the school and several initiatives to increase the effectiveness of those professional learning sessions. The Technology Focus Team, created last year, spearheaded technology-related professional learning sessions and the majority of teachers found those professional learning sessions helpful and applicable. Survey results at the end of the year indicated various learning models that teachers thought may be more effective for professional learning and the Technology Focus Team will try to incorporate those strategies in the coming year. Additionally, the principal is committed to technology

education and is willing to send interested teachers to technology-related professional development outside the school when needed.

However, the greatness weakness and threat to ongoing professional learning is time. Because the school does not have a Technology Coach, teachers on the Technology Focus Team are responsible for technology professional learning, which is often a burden for them considering their full teaching loads. Also, professional learning sessions occur once a month during teachers' planning times. This planning time is also reserved for a host of other meetings during the month, and since it occurs during the school day, teachers are often districted or simply do not want to be at training because they would rather be working in their classrooms. Professional learning before and after school has been largely unsuccessful in the past because of the school time structure in the county; the elementary school releases before the high school and the middle school starts after the high school, so teachers with students at these schools are unable to stay late or arrive early each day. Similarly, because teachers conduct professional learning, instead of a Technology Coach, there is little opportunity for ongoing professional learning, follow-up, or one-to-one training.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools. Knight, J. (2007). *Instructional Coaching: A Partnership Approach to Improving Instruction*. Thousand Oaks, CA: Corwin Press.

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
 53% of teachers disagree or strongly disagree that hardware issues regularly prevent them from using technology in the classroom. Only 28% agree that hardware issues prevent them from using technology in the classroom (Barnett, 2014). Technician specialists respond quickly to emails. There is a protocol for notifying them of problems and they address problems usually within one to two days. Technicians are very knowledgeable and able to offer quick solutions. Desktop computers are reliable in the various 	 42% of teachers disagree that network issues prevent them from using technology in the classroom, but 37% agree that network issues prevent them from using technology in the classroom (Barnett, 2014). The wireless network is not large enough to accommodate all the students at the school, especially on multiple devices. When teachers check out a laptop cart of 30 computers, usually only 20 computers are able to get onto the wireless network at a single time. At the end of the day, many of the laptops are no longer charged (if a teacher has 	 The county Help Desk is available to help teachers troubleshoot minor problems (change email password, etc.) without requesting a technician. A school level support technician would be able to address all issues in the building promptly. 	 Students easily damage desktop and laptop computers and it is often difficult to determine which student caused the problem if it is an internal, rather than external, issue. The wireless network is not big enough for full student use, thus preventing many teachers from using BYOD.

	computer labs.	used them for each of her	
•	Teacher laptops are reliable	classes during the day).	
	and use a separate network	• Few teachers in the	
	than the students' BYOD	building can troubleshoot	
	network.	technical problems; most	
•	Teacher laptops are updated	have to rely on the	
	and checked for viruses	technician specialist.	
	each summer.		

Summary/Gap Analysis:

Woodland was one of the first schools in the county to go wireless last year, and while this has presented numerous opportunities for classroom learning, it has also presented some issues in regards to bandwidth. The wireless network is not big enough for the school so many of the resources become unusable because they cannot access the Internet. A significant number of teachers indicated that network issues did prevent them from using technology in their classrooms.

Still, hardware issues are relatively minor. The technician assigned to the school is prompt and responsive, though it would be nice if he were not also assigned to other schools as well. The desktop computers connect to the Internet much easier than laptop computers, and teachers have a separate network from the student BYOD network so they are always able to check email and enter grades even if the BYOD network is overloaded. The county Help Desk is staffed throughout the school day and available to assist teachers with minor problems, like password resets, in order to avoid overburdening the technician with such issues. However, the school does need a better system for identifying broken devices and any students responsible for breaking devices, since every year some laptops must be discarded or repaired due to damages.

Data Sources:

Barnett, S. (2014). Evaluation of a first-year BYOD initiative. Stockbridge, GA: Henry County Schools.

ESSENTIAL CONDITION EIGHT: Curriculum Framework

ISTE Definition: Content standards and related digital curriculum resources

Guiding Questions:

- To what extent are educators, students, and parents aware of student technology standards? (QCCs/NET-S)
- 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/QCCs as appropriate?

• How is student technology literacy assessed?

Strengths	Weaknesses	Opportunities	Threats
 Each subject area has various digital curriculum available include e-books, online extensions exercises, software tutorials, etc. Teachers agree that technology can help address content standards. Many teachers already use technology to teach standards. Credit recovery students use online content from Georgia Virtual Schools. 	 Teachers, students, and parents are unaware of student technology standards and can speak only vaguely of the need for students to be technology literate to be college or career ready. Therefore, the standards are not utilized when creating lessons or planning curriculum. There is no county-wide technology skills assessment. The digital curriculum available is inadequate; for example, teachers may receive only 10 licenses for a class of 30 students. Most students are proficient in Internet technologies, but do not know how to create 	 The Common Core Georgia Performance Standards can easily be aligned with the NETS-S standard, especially in literacy subjects that involve research, higher-order thinking, and evaluating resources. The Technology Focus Team could be in charge if disseminating technology standards to teachers. The school could educate parents about the technology standards. Several teachers will pilot Edgenuity in regular courses and the Personalized Learning Academy next year. Edgenuity is an online 	There do not seem to be any plans for assessing student technology literacy.

specific Microsoft Word elements, such as formal	platform that contains standard-aligned digital	
term papers or	content and assessments.	
spreadsheets.		

Summary/Gap Analysis:

Teachers, students, and parents at the school are unaware that national technology standards exist. As a matter of fact, these technology standards have never even been mentioned in Technology Focus Team meetings, the group of teachers who would be most likely to be aware of the standards. Teachers are probably unaware of the standards because no technology assessment exists. Because teachers are so focused on test scores, the technology standards are neglected because they are not tested. Teachers do agree that students need to be technology literate in order to be college or career ready but without specific standards, it is unclear what "technology literate" means, and each teacher interprets this differently. Many teachers assume students will learn enough technology in their business education courses and so do not include technology lessons in the content areas. However, while students are proficient in Internet technologies, especially social networking, they do not have adequate skills in Microsoft Word, Excel, or PowerPoint, and often lack basic competencies in these programs, which can make technology integration in the classroom difficult. In moving forward, the county needs to create a technology skills assessment to measure students' technology literacy and inform teachers, students, and parents of technology standards so that technology standards will be intentionally taught.

Digital curriculum components do exist for each subject area, but they are largely regarded as extension items or enrichment. Teachers do not typically rely on digital curriculum in the classroom, except for credit recovery classes. This may change next year as the school opens a Personalized Learning Academy and several teachers pilot courses in Edgenuity, an online learning platform with standards-aligned digital content and assessments. The district virtual academy has already used Edgenuity, and it will be moving into the mainstream schools next year. Currently, credit recovery students use digital curriculum from Georgia Virtual Schools.

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Appendix A: Survey Questions

This survey was used for my action research project in EDRS 8900. It was administered and analyzed in April 2014 and used by the Technology Focus Team to create goals for the next school year.

Evaluation of Technology Initiative at Woodland High School

Choose one answer from the choices provided.

- 1. For how long have you been teaching?
 - a. 0-4 years
 - b. 5-8 years
 - c. 9-14 years
 - d. 15-20 years
 - e. 20+ years
- 2. In what department do you spend most of your teaching day?
 - a. CTAE
 - b. English
 - c. Fine Arts
 - d. Health/PE
 - e. Math
 - f. Science
 - g. Social Studies
 - h. World Languages
- 3. Are you a regular education or special education teacher?
 - a. Regular Education
 - b. Special Education
- 4. How often do you teach a lesson for which students should use personal mobile devices?
 - a. Each day
 - b. 1-2 times each week
 - c. 1-2 times each month
 - d. 1-2 times each year
 - e. Never

5. What types of activities do you have students complete using their personal mobile devices? Please select all that apply.

a.	Using calculators, diction	naries, thesauri, cloc	ks for time, etc			
b.	Searching the Internet for	or information, QR co	odes			
c.	Completing drill-type pr	actice activities				
	Taking pictures, filming					
	Viewing content related					
f.	Submitting responses for		ent (polls/surve	ys)		
g.	Creating products (documents)		-	,		
	Collaborating with peers					
	Other:					
1—Strongly d 2—Disagree 3—Neither ag 4—Agree 5—Strongly ag Please provide	ree nor disagree	swers, especially if y	ou choose "5	strongly agree.		
	1	2	3	4	5	
b. Hardware is	sues (computer/device m	alfunctions) regularl	ly prevented me	e from using te	echnology in the cl	lassroom.
	1	2	3	4	5	
c. Students wit	thout their own personal of	devices regularly pre	evented me from	n using techno	logy in the classro	oom.
	1	2	3	4	5	
d Student mis	hehavior (off-task) using	nersonal mobile dev	vices regularly i	nrevented me t	From using technol	logy in the classroom

- 1	2	2	4	_
1	2		4	5
-	_	-	•	•

(Optional) Explain any of your answers, especially those for which you chose "strongly agree" or "strongly disagree."

- 7. In terms of helpfulness, how would you rate professional development sessions related to technology that you have attended this year?
 - a. Not helpful at all because I do not care to use technology in the classroom
 - b. Not helpful because they did not provide me with tools I could use in the classroom
 - c. Helpful but I did not get to use many of the tools this year in the classroom
 - d. Helpful and I used some of the tools this year in the classroom
 - e. Other (Please explain your answer.)

(Optional) Explain your answer.

- 8. How prepared did you feel at the beginning of the year to integrate technology in your classroom?
 - a. Not prepared
 - b. Somewhat prepared
 - c. Adequately prepared
 - d. Extremely prepared

(Optional) Explain your answer.

- 9. How prepared do you currently feel to integrate technology in your classroom next year?
 - a. Not prepared
 - b. Somewhat prepared
 - c. Adequately prepared
 - d. Extremely prepared

(Optional) Explain your answer.

10. For	each of the fo	ollowing options,	choose to what	extent you think	t it improved or	you think it w	ould improve	your technolo	ogy-
related 1	professional le	earning.							

10. F	or each of the follow	ving options, choose	to what extent	t you think it im	proved or you	think it would	improve y
	d professional learn						
1—T	his would definitely	negatively affect m	y professional	learning experi	ence.		
	, ,	affect my profession	- 1				
		t my professional lea			vely or positive	ely.	
		affect my profession					
5—T	his did or would def	finitely positively af	fect my profess	sional learning o	experience.		
a.	whole group sessi	ions attended simult	aneously by the	e entire staff			
		1	2	3	4	5	
		1	2	3	4	3	
b.	sessions designed	for teachers in spec	ific departmen	ts			
		1	2	3	4	5	
c.	differentiated sess	sions for beginner, in	ntermediate, an	nd advanced use	rs		
		1	2	3	4	5	
d	multiple entions	(different tenies) for	gaggiang an a	maaifia day			
u.	multiple options ((different topics) for	sessions on a s	specific day			
		1	2	3	4	5	
e.	sessions offered a	it times other than pl	lanning periods	3			
		1	2	3	4	5	
		1	2	3	4	3	
f.	specific times for	follow-up after prof	fessional learni	ng			
	specific vinites for	rono w wp wroon pro-		8			
		1	2	3	4	5	
g.	observing teacher	rs using different typ	es of technolog	gy			
		_		2		_	
		1	2	3	4	5	

h.	online tutorials or videos	of teachers of te	eachers demons	trating how to u	ise certain type	s of technology		
		1	2	3	4	5		
i.	i. specific examples of how others teachers are using technology in the classroom							
		1	2	3	4	5		

11. What do you need in order to integrate technology to a greater extent in your classroom next year? Please consider all questions from the survey in providing your answer.