Bartholomew Consolidated School Corporation: An Overview of One System's

Implementation of Universal Design for Learning and the Use of Accessible

Technology to Improve the Learning of all Students

Submitted by

Dr. John Quick, Superintendent

Chairman Harkin, Ranking Member Enzi and members of the Senate Committee on Health, Education, Labor and Pensions, thank you for inviting me to testify before the committee. I am Dr. John B. Quick, superintendent of Bartholomew Consolidated Schools, Corporation (BCSC) in Columbus, Indiana. I want to share with you information about how our school district uses the framework of Universal Design for Learning (UDL) to expand and guide our use of accessible technologies to enhance our instruction and gain better outcomes for our students.

Demographics

Bartholomew Consolidated School Corporation (BCSC) is located in Columbus, Indiana, 45 miles south of Indianapolis. Of our 12,500 students, 0.3% are American Indian, 1.8% are Black, 3% are Asian or Pacific Islander, 4.9% are Multicultural, 6.7% are Hispanic, and 83.4% are White. Within our population, 45% receive free/reduced meals. 11% are English Language Learners and 13.9% receive special education services. These students are served through our early childhood center, eleven elementary schools, two middle schools, three high schools, and our adult/alternative education center (Bartholomew Consolidated School Corporation, 2012). Two of our elementary schools utilize the New Tech Model, while a team within one middle school and one of our high schools are part of the New Tech network. (The New Tech Network, 2012).

Similar to other communities, the demographics in Columbus have shifted in recent years. Between 2002-2003 and 2011-2012, BCSC saw significant growth in the number of students qualifying for free and reduced lunches (31% to 45%) and the overall number of minority students served (9.7% to 15.7%). The most significant growth, however, has been in the number of students who are English Language Learners (ELL).

In 2002-2003, BCSC served 1.7% students identified as ELL. In 2011-2012, that percentage increased to11%. These individuals represent 50 different languages.

In 2002-2003, 16.4% of BCSC students were eligible for special education services. It continues to be the goal of the administration that these students receive an overwhelming majority of their services alongside their general education peers. Currently, 13.9% of BCSC students are eligible for special education services with approximately 90% of these students included within the general education setting for at least 80% of their instructional day. The high percentage of students with disabilities served in general education is reflective of BCSC's belief that full access to the curriculum should drive all instruction.

Universal Design for Learning and Accessible Technology: BCSC's Philosophy

BCSC's expectation that <u>all</u> learners will achieve to their highest levels drove the need to identify an instructional framework. Thus, in 2004 the BCSC leadership identified Universal Design for Learning (UDL) as the framework to support the inclusive practices for students with disabilities <u>and</u> enhance the access of curriculum for <u>all</u> students (see Appendix A). One of the ways BCSC makes curriculum accessible to all students is through the use of accessible technology.

UDL is a curriculum designing tool that helps teachers design lessons that will be accessible to all students. There are three overarching principles (engagement, representation, and action and expression). Each is broken down into nine guidelines (three under each principle). The guidelines help teachers select teaching strategies, methods and accessible technologies, which will, when combined, create an accessible learning environment. Brain research (Rose & Dalton, 2006) tells us that learners'

abilities are multi-faceted and no one method of presentation, instruction, or evaluation can address every learner in a meaningful way (Hitchcock, Meyer, Rose & Jackson, 2002). Fortunately, UDL provides a framework within which schools can investigate or build any curriculum. The curriculum is not altered; rather, it is enhanced through the teacher's application of the UDL principles and use of accessible technologies.

For example, a second grade teacher creates an introductory lesson about electricity. First and foremost, a goal linked to the state standards is determined: *Students will demonstrate their current knowledge of the flow of electricity*. Next, the teacher uses the nine guidelines to determine what strategies and technology to use. The following example focuses on the principle of engagement and the first guideline of "options for recruiting interest."

When the teacher considers options for recruiting interest, he designs the lesson so the topic is relevant and authentic to his students. He might use pictures, multimedia (e.g., showing a brief child-centered video about electricity or an app demonstrating how electricity is made), a group discussion to list what items utilize electricity, and/or allow students to safely hold or touch items that utilize electricity. The teacher knows, because of the defined guideline, that these activities must be personalized and contextualized to his students' lives while being relevant for different racial, ethnic, cultural, and gender groups. By addressing each of the nine guidelines, the teacher can be confident that he is creating a learning environment and using technologies, which are accessible to his learners.

UDL aligns with BCSC's beliefs in providing a structure for clear instructional practices while addressing a specific instructional goal (Center for Teaching and

Learning, 2005). Because instructional goals might involve the use of technology, it is

BCSC's expectation that teachers choose whether or not to utilize accessible technology

to align with the standards-based goals they have determined for their lessons.

Specifically, accessible technology must be chosen based on the framework of UDL.

The use of technology must engage students; explain an idea, action or outcome; or

provide an avenue for students to demonstrate knowledge (Doyle & Giangreco, 2009). If

we do not use technology that makes curriculum accessible, within the framework of

UDL, we will not be addressing the needs of all students and nothing in our classrooms

will change.

Our Journey

BCSC's journey to the adoption of UDL began in 2002 when the Director of

Special Education worked with a consultant from The Center on Education and Lifelong

Learning at Indiana University to answer the following question: *How are decisions made*

concerning special education services? This inquiry led to conversations with general and

special educators throughout BCSC and culminated in the creation of an instructional

service delivery plan. This plan focused on how to best help students eligible for special

education have access to the general education curriculum and become proficient in

BCSC's learning objectives. All teachers involved in the education of children with special

needs were trained on this new plan. This shift prompted BCSC to apply for participation in

a statewide project titled PATINS. The goal of this project was to "impact both the

organizational capacities of local public schools and the professional capabilities of school

staff in the delivery of assistive technology services and the implementation of Universal

Design for Learning principles" (PATINS Project,

2009). BCSC's participation, though encouraged by BCSC's Director of Special Education, was supported by the directors of elementary and secondary education. This was a deliberate choice by BCSC's leaders to ensure UDL would not be viewed as a special education initiative but as a system-wide initiative. An instructional rubric was designed to help teachers recognize their own level of implementation and to help building leaders identify strong leaders in the implementation (see Appendix B).

In addition to UDL, BCSC adopted two other structures to ensure that (a) teachers are supported in their ability to teach in diverse classrooms and, (b) all students are provided with behavioral supports so they can be successful within the learning environment. Examples of how these strategies link to UDL are given below under "Our Impact on Learning." Instructional videos linking UDL to these strategies can be found at http://www.bcsc.k12.in.us/page/346.

The Instructional Consultation Teams (IC-Teams) process was identified as a method teachers could use to problem-solve issues related to curriculum and instruction (Gravois & Rosenfield, 2006). As implemented in BCSC, the IC-Team model is grounded in the principles of UDL to assist teachers in creating an instructional match for the student. This process dictates that when there is no match, no one is at fault; rather, a series of data collection steps needs to take place so the teacher, child, classroom environment and accessible technology needs can come together to create an appropriate match. A seventh grade student recently was experiencing significant behavior problems. This student with autism, who also is identified as high ability, continued to struggle in many of his high ability core courses. Following an examination of the data and possible function of his behavior, it was determined the current instructional strategies were not a

match for this student. After utilizing a computer based program, this student no longer exhibits the previous behaviors, and in fact, is successfully completing high school courses as a seventh grade student. Without the availability of this accessible technology, this student would have most likely ended up as a dropout.

To ensure BCSC was supporting the behavioral needs of all students, we also adopted Positive Behavior Instruction and Supports (PBIS) in 2004-2005 as a core process. PBIS, as recognized in IDEA (2004), is a systematic way to develop and implement school-wide behavioral expectations and "achieve socially important behavior change" (Sugai et al., 2000, p. 133). These expectations are taught to students using age appropriate and culturally appropriate lessons. When students understand how they are expected to behave within a specific environment (e.g., the classroom, the hallways, the lunchroom, or the stair wells), students are more likely to demonstrate those behaviors (Sugai, Horner, & Gresham, 2002). PBIS teams were established at each school and continue to meet monthly to investigate behavioral and academic data to pinpoint trends and issues. Using this information, the teams design and implement plans to support positive changes in student and staff behavior.

In 2008, BCSC received a grant to support a project director to lead the implementation of UDL. During the grant year, the principals and staff in each building worked with the project director to decide what workshops or presentations would best suit the needs of their teachers. While some schools were experienced in applying the principles of UDL, other schools were relatively new to applying the principles school-wide. The principals reported that this was an effective way for their staff to become more knowledgeable and comfortable with the application of UDL in their classrooms.

The role of project director has become UDL Coordinator as BCSC demonstrates its specific focus on UDL and the necessity to continue training and support for its teachers.

Technology at BCSC

To support our implementation of UDL, BCSC's technology infrastructure includes the ratio of one computer for every 2.7 students. Our Technology Division supports 750 classrooms of which 360 have wireless access. In addition, we have a variety of hardware spread across the corporation including but not limited to: interactive white boards, document cameras, flip cameras, digital microscopes, clickers (i.e., hand held voting devices) and iPads.

Currently, students at the secondary level are participating in a 1 to 1 pilot that encourages students to bring their own device or utilize BCSC-owned devices. The majority of student-owned devices include smart phones, tablets, and iTouches with the only requirement being that the device can reach the Internet and that students log on to the internet through the district servers. Of those participating students, 748 bring their own devices while 380 BCSC-owned devices support the other students involved in the pilot. The creation of this pilot was fully guided by UDL. Appendix C includes the rubrics used by the 1 to 1 design teams. Appendix D includes the application teachers completed to participate in this pilot.

While BCSC is dedicated to accessible technology, we are committed to the use of UDL to help define how technology should be used. For example, our corporation is beginning to use an interactive information system called My Big Campus. Designed to look and operate like Facebook, this filtered, safe, on-line environment allows teachers to share information with other professionals and post assignments, exams (that open and

close for specific students at specific times), and post items for discussion. One social studies teacher held a discussion during the South Carolina Republican debate where students responded to questions and posted their own thoughts and questions about the debate. How does this fit with UDL? The teacher was aware that some students were not participating during in-class discussions and were not earning participation points. This option provided those students a way to earn those points, demonstrating the principle of expression. Next, the teacher knew that some students were unfamiliar with the primary process. Students who were previously uncomfortable asking questions about that process felt safe using this monitored, on-line environment. In addition, the teacher linked them to other on-line resources about the primary process. This demonstrated the principle of representation. So, instead of using technology to show a video during and after which students complete a worksheet, this teacher utilized technology to engage the students, represent supporting information, and gain information on his students' understanding of the primary process.

Our Impact on Learning

BCSC takes great care to ensure UDL is not viewed as "one more thing" or a "special education thing." UDL is our guiding instructional framework; thus, we work diligently to clearly connect various BCSC instructional, curricula and assessment efforts initiatives to UDL. If we cannot make those connections, we question the value of the initiative. Examples of how UDL and its use of accessible technology have had an impact on student outcomes include:

- Schools implement UDL to ensure students experience a variety of learning opportunities when learning Positive Behavior Instructional Support strategies. A

video from one of our middle schools shows how the students learned appropriate dress for school (Northside Middle School, 2012).

- Instructional Consultation Team facilitators are provided instruction on how to help teachers recognize and embed UDL strategies in their lessons (BCSC, 2011).

- English, math, social studies and science textbook and resource adoption committees were guided by the principles, guidelines and checkpoints of UDL (see Appendix E for the science example). In our recent social studies adoption, BCSC chose to adopt a portfolio of digital resources versus a hardback textbook (Lord Nelson, Arthur, Jensen, & Van Horn, 2011).

- Senior projects, a requirement for graduation, are designed to provide students the opportunity to demonstrate their accumulation of knowledge and experiences through a variety of options (Columbus East High School, 2012). Students' use of technology have included self-made videos, digitized musical productions, presentations utilizing on-line resources, and Power Point presentations. This level of choice (principle of engagement) and breadth of presentation style (principle of expression) helps ensure an exceptional rate of 95% completion.

- Between 2009 and 2011, the number of students with special needs in grades 3-8 who have passed the math portion of ISTEP increased 12.8%.

- Between 2009 and 2011, the number of students with special needs in grades 3-8 who passed the English portion of ISTEP has increased 8.7%.

- 68% of BCSC's English Language Learner (ELL) students in Grades K-12 increased 12 or more scale points from their most recent prior test to spring 2011

on the LAS Links (an Indiana Statewide assessment). Across the state, only 64% of this same group improved.

- BCSC met the Annual Yearly Performance (AYP) in both English and math for students with disabilities.

- BCSC met the Annual Yearly Performance (AYP) in both English and math for students with ELL.

- BCSC is one of 367 public school districts in the nation honored by the College Board and was placed on the 2nd Annual AP Honor Roll. Since 2009, BCSC has increased the number of students participating in AP from 256 to 467, while improving the percentage of students earning AP Exam scores of 3 or higher from 48% in 2009 to 52% in 2011. The framework of UDL and the effective use of accessible technology have created a learning environment where more and more students are academically successful. This success is translating into higher rates of participation in AP course and on the AP exams.

- BCSC 2011 ACT scores show that the percent of students demonstrating college readiness was higher than the national percentage of students demonstrating college readiness. This was true in all four sub scores of the ACT with 40% of BCSC senior participating in the ACT.

Finally, BCSC's focus on UDL to benefit all students has been recognized by the Center for Applied Special Technology (Center for Applied Special Technology, 2009), The Council for Exceptional Children (Council for Exceptional Children, 2010), and published articles in juried educational journals (Lord Nelson, Arthur, Van Horn & Jensen, 2009; Lord Nelson, Van Horn, Jensen, Vogel & Garrity, 2012).

Next Steps

Perhaps most importantly, UDL will be a key driver in the new teacher evaluation process that is currently under development in BCSC. In the new district classroom success rubric, UDL will be the framework for instruction. The Indiana Department of Education offered school districts the option of utilizing an existing teacher evaluation model or creating a model based on researched practices. A team of BCSC teachers, principals, and administrators are working together to create an effective framework for professional practice and evaluation which is grounded in the principles of UDL.

Conclusion

The application of UDL and the use of accessible technology to implement aspects of UDL take initial focus and time and will always involve creativity, but the rewards for the student and teacher are tremendous. Three aspects to bring this effort to scale in BCSC were essential:

1) The collaboration of the Director of Special Education, the Director of Elementary Education and the Director of Secondary Education who have conveyed the importance of UDL as the framework of instruction throughout the district;

2) The hiring of a dynamic instructional expert with knowledge of accessible technology to coordinate the implementation of UDL throughout the district.

3) The identification of practicing experts, also knowledgeable about accessible technology, who have been willing to share their classroom practices of UDL with other teachers throughout the district.

BCSC's adoption of UDL has taken time, commitment, and persistence in an age of constant educational change. We believe that UDL and the use of accessible

technology has placed us on a pathway to improved services to all of our students. With

its well defined and flexible framework, UDL has provided the necessary structure within

which BCSC's teachers can plan and feel confident in their profession.

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Bartholomew Consolidated School Corporation: An Overview of One System's Implementation of

Universal Design for Learning and the Use of Accessible Technology to Improve the Learning of

all Students

Spoken Testimony

Submitted by

Dr. John Quick, Superintendent

Bartholomew Consolidated School Corporation Overview

Good afternoon Chairman Harkin, Ranking Member Enzi and members of the Committee. Thank you for inviting me to speak about Bartholomew Consolidated School Corporation and how we work to achieve the best possible outcomes for every student. I would like to share how we use Universal Design for Learning as our framework for curriculum and instruction and how that helps our teachers effectively use accessible technology.

BCSC, as we refer to Bartholomew Consolidated School Corporation, is a district of 12,500 students. We are a rural school district about 50 miles south of Indianapolis and 90 miles west of Cincinnati. We have 18 schools serving our students. Of those students, 45% are eligible for free or reduced lunch, 16% are students of color, 14% receive special education services, and 11% are English language learners.

We have a diverse student population and work to address their learning needs. Therefore, in 2008 we made a purposeful decision to use Universal Design for Learning (UDL) across all our programs as the framework to design all instruction and curriculum in our district. We find this framework has helped us uphold our expectation that all learners will achieve to their highest level. Using UDL has advanced the educational outcomes that include:

- From 2009 and 2011,

    ☐ we had a 10.5% increase in the number of students with disabilities passing Indiana's statewide assessment;

    ☐ 68% of our English Language Learners increased their scale scores on the statewide assessment which was a greater increase than the state average;

And, we had a 7% increase of K-8 students receiving pass+, which is the state's highest recognition on the state testing in English Language Arts and math.

- In 2011,

  we met Annual Yearly Progress targets for both English Language Arts and math with our special education population and English Language Learner population;

  o and BCSC was honored by the College Board and placed on the 2nd Annual Advanced Placement Honor Roll for increasing the number of students participating in AP and improving the percentage of underserved students earning AP Exam scores of 3 or higher; and

At this point, let me take a minute and tell you what universal design for learning means to our schools. Just as the American with Disabilities Act requires buildings be accessible to all who might enter, UDL serves as a framework to make learning environments accessible to all students. There are three overarching principles: engagement, representation, and action/expression. When used, these create an accessible learning environment.

Because our population is diverse, BCSC recognizes the need to create flexible learning environments which are standards-based and utilize accessible technology when appropriate to the lesson. We are fortunate to have access to technologies such as computers, internet access, smart phones, tablets, and other devices; however, those technologies only come into use when they have been identified as connected to the instruction. Teachers utilize the framework of UDL as a decision-making tool to help them determine what strategies, accessible technologies, and methods they will use to help students achieve the goals of the lesson.

For example, a seventh grade student was recently experiencing significant behavior problems. This student with autism, who also is identified as high ability, continued to struggle in many of his high ability core courses. After investigation, it was determined the current instructional strategies were not a match for this student. Because we provided the student access to a computer-based program, this student no longer exhibits the previous behaviors. In fact, this student is successfully completing high school courses as a seventh grader. The availability of accessible technology has allowed this student to remain in school.

In another example, a social studies teacher held an on-line discussion during the recent South Carolina Republican debate. Our corporation uses an interactive information system called My Big Campus which looks like Facebook, but is a filtered, safe, on-line environment. In this class, students responded to questions and posted their own thoughts and questions about the debate. How does this fit with UDL and accessible technology? The teacher was aware that some students were not participating during in-class discussions and were not earning participation points. This option provided those students a way to earn those points, demonstrating the principle of expression. Next, the teacher knew that some students were unfamiliar with the primary process. Students who were previously uncomfortable asking questions about that process felt safe using this monitored, on-line environment. In addition, the teacher linked them to other on-line resources about the primary process. This teacher utilized technology to engage the students, represent supporting information, and gain information on his students' understanding of the primary process.

BCSC's adoption of UDL and the use of accessible technologies has taken time, commitment, and persistence in an age of constant educational change. We believe that UDL and the use of accessible technology has placed us on a pathway to improved services to all of our

students. With its well defined and flexible framework, UDL has provided the necessary structure within which BCSC's teachers can plan and feel confident in their profession.

Thank you for inviting me to share information about how BCSC uses UDL to choose how to best use our accessible technology and my staff and I are at your service if there is any way we may be of help.

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Appendix A

A Description of UDL

Principles	Representation	Action and Expression	Engagement
Guidelines	1: Provide options for perception	4: Provide options for physical action	7: Provide options for recruiting interest
Guidelines	2.: Provide options for language, mathematical expression, and symbols	5. Provide options for expression and communication	8: Provide options for sustaining effort and persistence
Guidelines	3: Provide options for comprehension	6: Provide options for executive functions	9: Provide options for self-regulation

CAST graphic:

http://www.udlcenter.org/sites/udlcenter.org/files/updateguidelines2_0.pdf

UDL calls for:

☐Defining goals that provide appropriate challenges for all students, ensuring that the means is not a part of the goal.

☐Using methods that are flexible and diverse enough to support and challenge all learners.

☐Using materials that are flexible and varied and take advantage of the digital media, such as digitized text, multimedia software, video recorders, tape recorders, and the Internet.

☐Using assessment techniques that are sufficiently flexible to provide ongoing, accurate information to inform instruction and determine student understanding and knowledge (Meo, 2008, p. 22).

Appendix B

UDL Rubric: A Portion

		Not Yet Evident	Emerging	Intermediate	Advanced
Individual Goals	Clarity of goals and evidence of different objectives for various learners	No students are clear on the overall goal and all students are expected have the same objectives.	Few students are clear on the overall goal for the lesson and their learning objectives.	Some students are clear on the overall goal for the lesson and their learning objectives.	Every student is clear on the overall goal for the lesson and their learning objectives.

UDL Principle	UDL Teaching Method	Not Yet Evident	Emerging	Intermediate	Advanced
Multiple means of representation	Provide multiple examples	Students are only given one example of skills needed to complete the assignment.	In preparation for a lesson, the teacher has few examples that identify skills and concepts needed to complete the assignment.	In preparation for a lesson, the teacher creates some examples to find and identify skills and concepts needed to complete the assignment.	In preparation for a lesson, the **teacher and students** create multiple examples of finding and identifying skills and concepts needed to complete the assignment.
Multiple means of representation	Highlight critical features	Teacher provides critical information for the lesson through only one modality.	Teacher provides critical information for the lesson through only two modalities.	The teacher provides critical information for the lesson through oral and visual presentation and highlights critical features in written and visual form, then monitors students to check their focus on important features of the lesson.	The teacher provides critical information for the lesson through oral and visual presentation and highlights critical features in written and visual form, then monitors students to check their focus on important features of the lesson. Additionally, by having texts available in digital format, the teacher or students could literally highlight critical features of the text while preparing the lesson assignments.

Appendix C

1:1 Pilot Rubric

SECTION I - One-to-One Observations: Classroom use of the technology (used by teachers and administrators)

	Not evident	Emerging	Proficient	Advanced
1. UDL in action: *seeing/hearing or hearing about examples of UDL*	There is no evidence of UDL being applied	One or two of the principles are touched upon during the lesson	The principles of UDL can be identified within the lesson	The principles of UDL drive the presentation of the lesson
2. Cramming: *bringing computers into the classrooms but sustain current practices and pedagogies*	Computer use in class is limited to note taking and/or doing worksheets	Computer use in class includes note taking, reading articles and/or surfing the net	Computer use in class is a companion to discussion groups	Computer use in the classroom is clearly connected to 21st century skills (e.g., critical thinking, analysis and communication)
3. Access to on-line resources and system safety/integrity: *access to on-line resources*	Teachers are denied access to on-line resources due the school system's firewall	Teachers can request access to on-line resources but can still be denied	Teachers can request access to on-line resources and receive permission	Teachers can access any on-line resource
4. Teaching non-consumers*: *engaging students who historically disconnected themselves from learning*	No strategies are used to engage the non-consumers	Few strategies are used to engage the non-consumers	Occasional strategies are used to engage the non-consumers	There are clear and evident strategies to engage the non-consumers
5. Going around and underneath: *allowing for and encouraging innovation creates change*	Pure instructional focus on a standardized measurement	Majority of instructional focus on standardized measurement	Evidence of innovation and creativity while addressing standards	Application of innovation and creativity while addressing standards
6. Nuts and Bolts: *learning when technology fails*	When technology fails the lesson is cancelled	When technology fails, part of the lesson is taught	When technology fails, the majority of the lesson is taught	When technology fails, the entire lesson is taught in a different way

*Non-consumers: for this observation sheet, non-consumers are students who are present in the classroom but who are not engaged.

Appendix D
1:1 Pilot Application

Personal Information
1. Name
2. School

Instructional Focus
Project abstract:

> Please include the # of students, type(s) of device(s), # of devices, web-based applications, additional hardware, and/or other information that would support student learning.

☐ What are the essential questions you will address through this pilot? (FAQ)

☐ What are your professional driving questions (what will drive how you implement the devices)? (FAQ)

Learner Focus
Using the principles and guidelines of UDL to frame your description (see www.cast.org):

☐ Demonstrate how the use of the devices will enhance student learning

☐ Demonstrate how the students will engage with and express higher order thinking

☐ Demonstrate how the students will engage and express the habits of mind

☐ Demonstrate the acquisition of 21st century skills by the students

☐ How will you foster student ownership of learning?

Deployment
4) How will you use web applications to support the learning you expect to take place?
5) How will you foster a culture of responsibility? (FAQ)
6) Are you familiar with the devices you are proposing to use?
7) Does your device usage require the use of a separate server?
8) Are there any policy, rules, or regulations that will need to be addressed if your pilot is chosen? (FAQ)
   > What will they be?
9) How will you measure your pilot? (consider student outcomes, rate of device use, how teacher friendly is the use of the devices, is it easy is your pilot to replicate within your discipline and across disciplines?)

Professional Development
1. Pilot participants are expected to share lessons created using the technology to be shared with other BCSC teachers. Please check if you acknowledge this.
2. Pilot participants are expected to be interviewed and possibly recorded (tape or video) for in-house trainings of other staff members. Please check if you acknowledge this.
3. Pilot participants are expected to participate in a professional learning community. Please check if you acknowledge this.

Appendix E

2012 BCSC Secondary Science Adoption Rubric - Technology

	Weak	Emerging	Advanced
TECHNOLOGY	☐ Technology options do not align with performance standards and applications ☐ School network is in not able to support technology options ☐ Staff and/or students cannot use collaboration through technology as part of regular classroom practice ☐ Technology is not aligned with UDL ☐ Technology does not allow for agility within the curriculum to take advantage of change & updates in research/discovery ☐ Training is not provided for the technology ☐ Materials cannot be accessed at home or by parents ☐ Technology resources have unreasonable cost to both the school and stud	In addition to the "Weak" criteria: ☐ Technology options do align with current performance standards and applications ☐ IT support is sufficient to support computer and network infrastructure ☐ Staff and students can regularly collaborate through technology ☐ Technology is somewhat aligned with UDL ☐ Technology allows for some agility within the curriculum to take advantage of changes or updates in research and discovery ☐ Initial training is provided for the use of technology ☐ Material can be accessed at home and by parents ☐ Technology resources are somewhat reasonable cost to both the school and the student	In addition to the "Emerging" criteria: ☐ Technology resource is fast, stable, reliable, and provides individual and shared storage space for staff and students ☐ Company support provides robust support and is very responsive to issues as they arise ☐ Resources would be heavily used by staff and students as a communication and collaboration tool (within and between schools). And can be widely used to support the teaching methodology and inter-school sharing ☐ Technology is completely aligned with UDL ☐ Technology supports an agile curriculum to take advantage of current research and discovery ☐ Extended training is provided for the use of technology ☐ Resources allow other digital and online tools to support student engagement and instruction ☐ Technology resources have a reasonable cost to both the school and the student