

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 to 11%. 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 all 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 and enhance the access of curriculum for all 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.