LEADING IN AND BEYOND THE LIBRARY
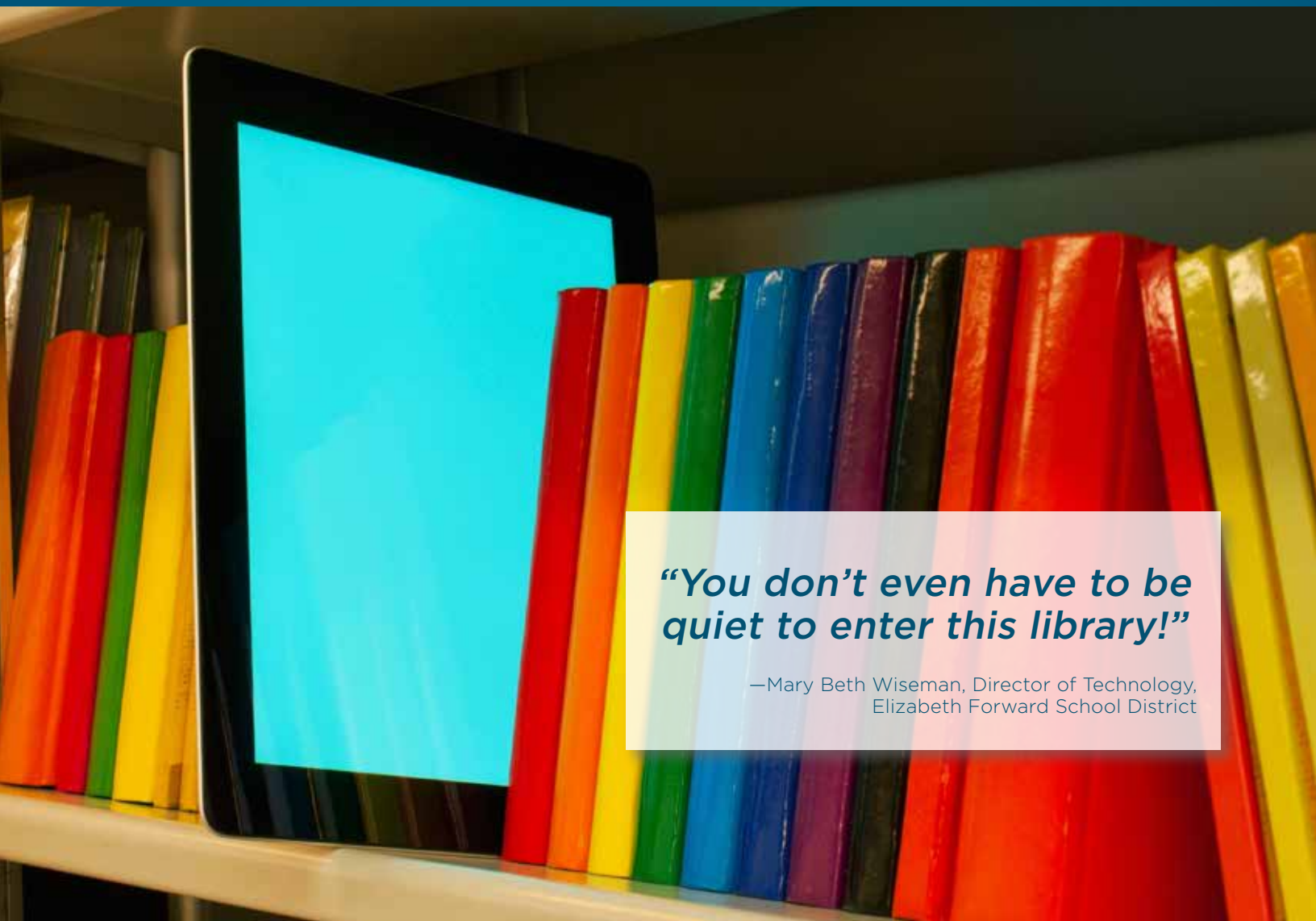
"You don't even have to be quiet to enter this library!"

—Mary Beth Wiseman, Director of Technology,
Elizabeth Forward School District

By Mary Ann Wolf, Rachel Jones,
and Daniel Gilbert

January 2014

ALLIANCE FOR
EXCELLENT EDUCATION

The implementation of digital learning has changed the potential of school librarians and libraries. Many principals and district leaders are utilizing the role of the school librarian and the library and its resources as important elements in the digital learning transition, the systemic approach to integrating the effective use of technology to improve student outcomes. According to Melissa Johnston, "Because of their knowledge of pedagogical principles and curriculum, paired with technology and information expertise, school librarians are in a unique position to serve as leaders and valuable assets through making meaningful contributions toward the integration of technology and learning."[1] While many districts and schools recognize the importance of the librarian, others do not. In the 2006–07 school year there were 54,445 public school librarians in the United States, but by 2010–11 the number had decreased almost 8 percent, to 50,300 positions.[2] This is likely the result of budget decreases, a lack of understanding of the position by school and/or district leaders, or the use of classified employees, not certified librarians, in the school librarian position. Understanding how districts and schools that are making strides in digital learning and student outcomes are tapping into the expertise of librarians and continuing to evolve the role of school librarians and libraries, while also taking into consideration budgetary and knowledge challenges, is essential to the digital learning transition.

KEY WORD

The term "school librarian" has been officially adopted by the American Library Association and the American Association of School Librarians. This term will be used throughout the paper to include library media specialists (elementary, middle, or high school), teacher librarians, and media coordinators. When describing a particular district or school, the actual title adopted by the school or district will be used.

In districts and schools that are maximizing the use of libraries and school librarians as essential to the digital learning transition, the role of the school librarian is changing as it relates to other teachers, students, and administrators. According to the U.S. National Commission on Libraries and Information Science, "Resource-rich school libraries and credentialed school librarians play key roles in promoting both information literacy and reading for information and inspiration. When staffed by qualified professionals trained to collaborate with teachers and engage students meaningfully with information that matters in the real world, school libraries become sophisticated 21st-century learning environments that offer equal opportunities for achievement to all students, regardless of the socio-economic or education levels of the community."[3]

In many districts, the recent introduction of College- and Career-Readiness Standards and the Common Core State Standards, which are being implemented in forty-six states and the District of Columbia, has only heightened the importance of changes in the roles of the library and school librarians. Because their work can affect different disciplines and grade levels, school librarians are uniquely situated to play a prominent and influential role in the implementation of the new standards.

A recently released, coauthored brief from the American Association of School Librarians and Achieve notes that it is important for school librarians to "develop a vision of the possibilities that an information-rich and technology-rich environment can have on every single learner and the way every teacher can improve their teaching."[4] Deeper learning and twenty-first-century competencies such as critical thinking, creativity, communication, and collaboration—the so-called 4 Cs—are also emphasized in the standards. School librarians often have opportunities to guide teachers in implementing these

Photo Credit: Robyn Young, Avon Community School Corporation

competencies into lessons and project-based learning approaches, and they can also help students to develop these competencies through individual or small group interactions.

While many districts and schools believe that the role of the school librarian has continued to grow and become more crucial with the advent of digital learning, school librarians still struggle to sustain positions in many areas of the country due to budget cuts or a limited view of the importance of the librarian in the digital learning transition. According to the American Library Association, between the 2006–07 and 2010–11 school years the nation lost more than 4,000 school librarians.[5] With the dramatic cuts in the past five years, some districts and schools have opted to place classified employees—support personnel who typically do not have teaching, librarian, counseling, or nursing certificates—rather than certified school librarians to work with students in the libraries. Terri Tremel, a teacher school librarian at Supai Middle School and district cataloger for the Scottsdale Unified School District in Arizona, says, "We lost two budget override elections recently and had to make cuts throughout the district. We currently manage libraries at our thirty schools with just fourteen school librarians." The need to reduce the district budget forced Scottsdale's administration to make some difficult decisions. Elementary school libraries are staffed with classified employees rather than certified school librarians; middle school librarians oversee the elementary schools and thus are available to their own students for reduced hours. The emphasis is on having certified librarians work in the secondary schools, although often for less than full time. The change has been accompanied by a dramatic decrease in the use of digital materials. Districts and schools need a clear understanding of how and why school librarians and libraries are critical for the digital learning transition to ensure the sustainability of the positions and the budgets to support the emerging roles.

CHECK IT OUT

Efforts such as Project Connect have been implemented to raise awareness of the crisis in libraries and the importance of the role of the school librarian. Project Connect's mission is to "craft an advocacy and curriculum program designed to forge strategic relationships between school library professionals and educational leaders," focusing largely on libraries' and school librarians' roles within increasingly dynamic and digital twenty-first-century curricula.[6] The discussion must shift to the new role of the school librarian in order for stakeholders to see the value, leadership, and potential of sustainability.
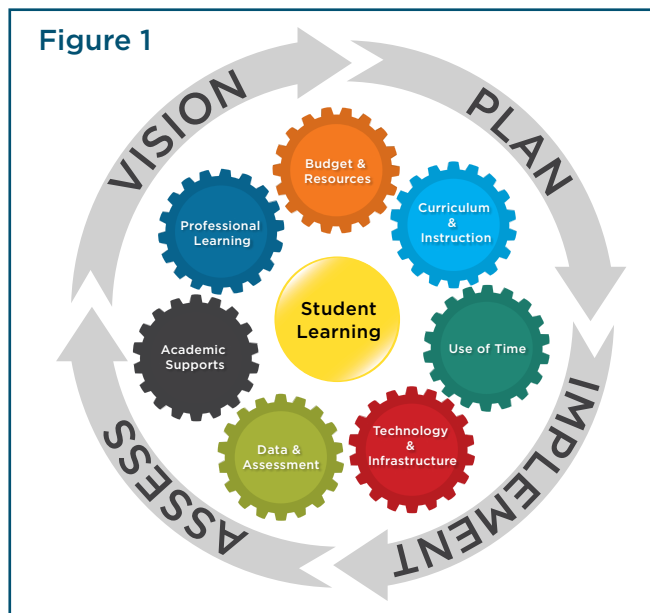
This report explores the many facets of the interactions with individuals in each of these groups with specific examples of each, using research from a literature review, several focus group meetings with chief technology officers and librarians, and input and interviews with stakeholders, including state-level directors of libraries, superintendents, corporate partners, and key national organizations (see Appendices A and C). The district and school examples highlight what is possible—and perhaps ideal—to ensure that the skills and knowledge of the school librarian are tapped to support and lead the digital learning transition. The examples and discussions of emerging roles highlight several key characteristics and recommendations for leaders of schools and districts as they consider how to lead and implement digital learning.

Libraries, School Librarians, and the Digital Learning Transition

As districts engage in the digital learning transition, the skills and knowledge of the school librarian are important resources for implementing a successful transition. One approach is the Alliance for Excellent Education's Project 24, which encourages districts to plan systemically for the digital transition and to consider the integral role of digital learning in each of the gears, or components, in the framework as a whole.

Several of the gears in Project 24 (see Figure 1, at right) can involve the role of the library and the school librarian. The descriptions below outline some of the immediate connections between the work and expertise of school librarians with the Project 24 gears, including but not limited to the following components:

- Curriculum and Instruction
- Professional Learning
- Academic Supports
- Technology and Infrastructure
- Budget and Resources

Figure 1

Curriculum and Instruction

School librarians are experts grounded in content who teach students how to

- define and refine problems and questions;
- locate and evaluate sources and resources;
- select, generate, and organize data and information;
- interpret information to create new understandings and knowledge;
- appropriately cite their work;
- share their findings and conclusions in an ethical manner; and
- build lifelong reading skills.[7]

School librarians' content knowledge also supports teachers' efforts to develop lessons using the most effective resources, including research materials or books often considered to be part of the school librarian's domain, as well as other digital resources (such as authoritative databases and e-books), tools, and applications. School librarians collaborate with educators to develop lesson plans, assist with integrating digital content into lessons, and model and support teachers' efforts to utilize classroom technology. For example, Lisa Norris, a library media specialist in Montgomery County, Maryland, worked with second-grade teacher Suzanne Kline to develop a lesson plan in which Maryland students collaborated with students in Russia. Students learned about each other's culture, focusing on similarities and differences between schools in Russia and those in the United States. The project entailed developing a storyboard, producing video clips to share information, and writing. The librarian collaborated in the planning and implementation of the lessons, including content development, focus on global awareness, and collaboration with the school in Russia.[8]

> *"For high school media specialists in a one-to-one setting, the roles have changed quite a bit. Teaching research and copyright skills, collaborative instruction, and project support continue to be essential responsibilities. However, there has also been a significant shift in the need to become an expert in instructional technology to support the needs within a one-to-one setting. Working closely with the instructional technology facilitator, our focus has moved from traditional instruction to assisting students and teachers in the use of various available applications and to help students produce products and projects using these new tools while developing new skills in the process."*
>
> —Kaye McKinney, High School Media Specialist, Rutherford County Schools, North Carolina

Professional Learning

Many librarians often provide professional learning opportunities for teachers and administrators, and even more so as both Common Core implementation and digital learning have expanded the need for professional learning. Librarians are also well positioned to ensure that professional learning opportunities are job embedded and ongoing, and that they encourage connections with colleagues.[9]

Librarians often recommend content, but they also demonstrate how that content can be used. Librarians provide formal professional development sessions for some or all of the educators in a school or district. For example, in the age of extensive access to online materials, sites, and resources, digital citizenship has emerged as an important responsibility of schools, teachers, and often school librarians. Even if schools have filters and other protections to restrict

Photo Credit: Robyn Young, Avon Community School Corporation

students from accessing inappropriate content, educators and schools recognize that helping students gain digital literacy is essential to their online learning and safety. In the Avon Community School Corporation in Indiana, library media specialist Robyn Young teaches digital citizenship directly to students. As a library media specialist it is easier for her to keep up-to-date on digital resources and content and share that knowledge with the students.

Academic Supports

Students often come to libraries for support with research and other projects, especially students who do not have access to the Internet or other resources at home. In recent years, school and public libraries have become important places for students to learn outside the hours of the traditional school day. As discussed in the information below outlining the role of the library and collaboration with public libraries, the library must be a learning commons or hub for the school. Many school librarians have worked to expand their hours so that students can access digital resources and the Internet before or after school. Students also seek out the help of

Photo Credit: Rocketship Education

school librarians on specific research projects and questions. Preston Lazer, the librarian at Battlefield High School, part of the Prince William County Public Schools in Virginia, says, "Because we have two school librarians, we have a staggered schedule and are able to be open a half hour before school and more than an hour after school." Data from a survey of nearly 1,300 Maryland school libraries shows that, on average, Maryland libraries are open for four hours a day outside regular school hours.[10]

Technology and Infrastructure

While school librarians are not typically responsible for supporting the use of technology throughout the school, they often have budgetary opportunities and responsibilities to identify digital needs and to purchase and implement technology, including computers and other digital resources, such as subscription databases, web-based services, e-books, and video streaming. In some cases, the library is the hub of technology access in the school, including 24/7 access to content, and school librarians have to ensure that Internet access is sufficient to meet the needs of all students. Many schools continue to lack other support for technology and digital resources. A 2011 survey of 295 National Board–certified school librarians, conducted for School Library Research, found that only about 57 percent of schools had full- or part-time technology support staff.[11]

While school librarians can be integral to the digital learning transition and an important lever for improving teaching and learning, they should not become the default technology support staff. John Milburn, who works in K–5 library media services for the Hillsborough County Public Schools in

Florida, describes a significant challenge that many school librarians encounter: "In many schools they provide technology support, which can limit the time they have for instructional support and professional development." Understanding the difference between supporting the digital learning transition and fixing technology problems is necessary to ensure that school librarians can make a difference in teaching and learning. The technology in the classroom must interact appropriately with technology in other parts of the school. Librarians have assumed a critical role in the process of selecting both the technology and the infrastructure.

Budget and Resources

Libraries and school librarians often receive a budget allotment that allows them to procure resources and instructional materials that are then accessible throughout the entire school. According to Beth Yoke, executive director of the Young Adult Library Services Association, "School libraries offer the most cost-effective option for providing resources, including digital media, to the school community. Everything that is made available through the library is accessible to every student and faculty member at the school. Librarians also have expertise in evaluating and selecting those materials that best meet the needs of the school, and often have access to key vendors and suppliers, which helps ensure the school gets the best possible price." Ensuring that the resources purchased through the library support the vision and needs of the school is crucial during the planning for and implementation of digital learning.

"Innovative school districts are rethinking the traditional school library and re-envisioning it as a digital media creation space. These informal learning spaces allow the school librarian to take on new roles as digital media mentors. They empower students to follow their interests/passions, and use digital media for that learning."

—Keith R. Krueger, CEO,
Consortium for School Networking

The Emerging Role of the Library and the Connection to Public Libraries

The library historically has been the place where students have come to use resource materials and check out books. Some libraries continue to primarily perform these functions, and even libraries that are transitioning to digital learning are used by students and teachers for both traditional and digital purposes. Many libraries have also evolved into common areas where students can work and access the Internet. Whether through devices that can access the Internet wirelessly or with school-owned computers, many students gather before, during, and after school to access digital materials and resources for learning and to seek guidance from the school librarian on projects and areas of interest. As Beth Yoke says, "Libraries across the country are currently repositioning themselves from focusing on providing content to a broader role that also facilitates the ability of students to create and share their own content, especially via digital media. Libraries used to function more like grocery stores, but now their role more closely resembles that of kitchens."

Ann McMullan, previously the executive director of educational technology for the Klein Independent School District in Texas, says, "In Klein, the libraries were among the first places where students accessed computers. Today, at all four high schools in Klein, students are issued convertible tablet PCs as part of the one-to-one program, but that has not negated the need for library resources. It

has, however, altered the format of library assistance and resources. The school librarians provide assistance and training to students and staff to help them successfully access, evaluate, and create information. The library has become a learning commons with flexible seating and shelving and areas for collaborative learning for students. Students taking online courses during the day utilize the library as a place to work, with the support of the school librarian."

Building on instructional strategies and collaboration with teachers, Battlefield High School librarian Preston Lazer says that his library is making "some nascent steps toward transforming the library away from a strict media-consumption model and into a place that incorporates a media-production model. Since our school already offers some exceptional opportunities for students to create physical engineering-type products, like the robotics program, we have focused the library's 'make' efforts around media products such as audio and video production." Students participate in lessons like the production of Thirty Second Propaganda videos.[12] The act of making these products demonstrates authentic evidence of critical understanding of complex concepts while simultaneously teaching the students how to use media production tools they can apply on their own later. Students use audio and video gear in the library for fun or to develop finished products for projects in other classes and sharpen technology skills that teachers leverage to engage them in learning activities.

Some libraries are evolving into dynamic environments with a focus on creating or making content, projects, or products, sometimes referred to as a "makerspace," an area where people come together to collaborate, share, and create, typically in a community atmosphere, such as a community center or library.[13] Albemarle County Schools in Virginia has implemented makerspaces in all of their schools, from elementary through high school. Monticello High School converted part of its library into a music studio, a "genius bar," and a "hacker" room for students, in which students can produce music, learn computer programming, and help repair technology in the school, respectively. The high school also has a 3-D printer to expand the creation opportunities. Monticello's school librarian observes that the library is now the "central hub of the school" and encourages student creation of content and collaboration.[14] The Albemarle superintendent, Pam Moran, says that "some say school libraries are obsolete—expendable in a time of scarce funding. I believe they are more important than ever

Photo Credit: Rocketship Education

… Today, we need school librarians who champion post-Gutenberg virtual and place-based libraries where patrons 'search, connect, communicate, and make.' Librarians who are evolving to this new model become not just curators, but also teach students and teachers to curate—a key competency of digital media literacy. They also recognize that our young patrons want spaces where they can use technologies to create. That's why we are modernizing school libraries to include makerspaces."

At the same time, students may not need to be physically in the library to access library resources, books, and materials. More libraries have moved to offering e-book options, and many of the subscription resources can be accessed through a student's account from home or in other parts of the school or community. This shift distributes the reach and access point of the library but also changes the dynamic and the need to physically be present in the space to use the resources.

Many school libraries and school librarians have strong connections and collaborate frequently with the more than 9,000 public libraries and their librarians to expand the access and resources available to students.[15] A recent survey indicates that 58 percent of public libraries provide opportunities for student visits from area schools, and 37 percent of public libraries share collections, e-books, or online resources with area schools. Fifty-nine percent provide special services for, or collaborate with, educators, and 90 percent of public libraries offer teen afterschool programs.[16] Districts and schools

Photo Credit: YOUmedia

agree on the impact of the collaboration with public libraries. Judy Steingass, technology director for the Sheridan County School District #1 in Wyoming, says, "Connection with the public library is huge for us, as we are physically challenged. The public libraries are very proactive with the school libraries; they have shortcuts for myON, a subscription that provides a personalized web-based reading environment for our kids, on their computers, they share digital resources; and they also offer after-hours options for students using their tools. The key is that the collaboration is seamless. Our public library has a 'digital bus' that goes to communities—it is set up on wireless and travels to really rural parts of the district with computers."

Five public libraries in Chicago have implemented YOUmedia learning spaces dedicated to teens, with support from the MacArthur Foundation. One space is focused on high school students and the others are for middle school students. The concept is to bring together students, mentors, technologies, books, and other institutions in Chicago in, according to YOUmedia, "one dynamic space to inspire collaboration and creativity."[17] Chicago Public Library librarians work with mentors from the Digital Youth Network to provide opportunities and workshops for students to engage in projects, such as using the recording studio, programming robots, or learning digital photography. YOUmedia often provides youth with the opportunity to utilize digital resources and tools (such as the recording studio, cameras, laptops, and 3-D printers) that they would not have access to outside of the library. Teens also interact with mentors who can guide them in projects as well as help them learn about career options.

While the role of the library continues to evolve and many of the essential opportunities and services that are provided are consistent with the more traditional research and resources, libraries in many schools and communities are becoming a more important place for students to create content and

collaborate, to have more equitable access to the Internet and digital resources, and to receive guidance from school librarians for schoolwork, research, and projects and for the pursuit of their own interests.

The Evolving Role of School Librarians

In the context of emerging trends in libraries and the digital learning transition in schools and districts, the role of school librarians continues to grow in relation to teachers, students, and administrators.

Teachers

In many successful digital learning transitions, school librarians are expanding their role in working with teachers. This may involve team teaching or developing lesson plans collaboratively. In other cases, it includes more formal professional development sessions for some or all of the educators in a school or district, which provides an opportunity for school librarians to serve as instructional and curriculum leaders. Sheridan County technology director Judy Steingass says, "The ideal school librarian would be one who embraces digital learning in addition to the books, supports the teachers as they rewrite curriculum and involve digital content, and helps build curriculum. This person should be one who embraces and supports teachers, technology, and books."

Although school librarians have always been in the business of identifying or helping teachers find content, digital learning expands this role through a multitude of open, subscription, and paid education resources. In some cases, teachers come to the school librarian with a lesson plan in mind but in need of the most useful resources. In other instances, a school librarian and teacher or team of teachers develop

2011 SCHOOL RESEARCH SURVEY

Result 1
80% of librarians who responded were involved in *"providing teachers with access to technology that enhances their instruction."*

80%
of respondents

74%
of respondents

Result 2
74% of librarians who responded were either fully or partially involved in *"collaborating with teachers to use technology in their instruction."*

the lesson plan together and then work collaboratively to identify the resources. The 2011 School Library Research survey found that 74 percent of respondents were either fully or partially involved in "collaborating with teachers to use technology in their instruction," and 80 percent were involved in "providing teachers with access to technology that enhances their instruction."[18] Librarians also have the opportunity to model the integration of digital content and resources to avoid the use of technology for technology's sake. This may include designing the lesson, being a part of the lesson the first time a teacher implements it, or team teaching with a teacher to provide that support.

The American Association of School Librarians notes that school library programs should promote collaboration within the learning community.[19] The increased need for collaboration between school librarians and teachers has led some prominent library and information science and education faculty to question whether or not more collaborative material should be required of pre-service school librarians and teachers. Don Latham, Melissa Gross, and Shelbie Witte of the Florida State University's School of Library & Information Studies have explored how the development of collaborative partnerships between teachers and school librarians could help to address the increased emphasis on learning outcomes and standardized tests. While they recognize that there may be barriers

to teachers and librarians working together, they also believe that rewarding collaboration, integrating cross-disciplinary courses into training, and sharing examples of effective collaboration can make a difference in the potential to support student learning.[20]

A joint action brief by Achieve and the American Association of School Librarians elaborates the role of librarians in participatory culture and as collaboration partners with teachers and administrators: "[S]kills related to media use (both critical analysis and production of media) are integrated throughout the standards" and are critical to success in school and life in the twenty-first century.[21] In addition, "[s]chool librarians must play an active role working collaboratively with the school leadership team to move the CCSS [Common Core State Standards] forward and make the necessary instructional and cultural shifts within their school environments. If the leadership team of the school includes all specialists who have a responsibility across the school, then as a team they can influence what is going on in every classroom, department and curricular area."

> *"Librarians collaborate with teachers to engage students in critical thinking. Teachers need this help from school librarians to meet standards, because they haven't the time and familiarity with existing and emerging information technology resources to make the most of what's available today. It's true that our library is physically at the center of the building, which helps me to engage teachers in a friendly way in passing and to encourage collaboration, but increasingly our virtual presence is also extending the power of our library program and our collaborative synergy beyond those four walls."*
>
> —Preston Lazer, Librarian, Battlefield High School, Prince William County, Virginia

After implementing a lesson, a school librarian can also initiate and encourage reflection on the part of the teacher. This opportunity to think about what did or did not work, what made a difference for students, and how to improve the lesson or the use of a particular resource or type of content allows a teacher to grow and advance in his or her use of digital content. It also allows a school librarian to model effective practice by ensuring that reflection is a critical element in the teaching and learning process, and can help teachers to learn how best to use assessment data to meet student needs. In efforts to help teachers reflect on their data as they develop lesson plans, Robyn Kaiyal, the associate director of academic affairs at the University School of Nova Southeastern University in Broward County, Florida, and a participant in the Digital Learning Transition MOOC-Ed course, says, "I have designed specific goals for our two media specialists with regard to getting our faculty to use digital media primarily as part of the formative assessment process. They sit in on department meetings and plan with the teachers and then go in and co-teach when the technologies are being used for the first time. They also hold mandatory training sessions that are

Photo Credit: Robyn Young, Avon Community School Corporation

really 'bring your lesson plans and work while I'm here to help you' sessions. We worked side by side with each teacher to help them through the process."

Many school librarians have always provided professional development for teachers, especially in the area of research and the use of different types of sources. However, digital learning expands the opportunities and demand for school librarians to be involved in more areas related to teaching and learning. Librarians in schools and districts that are in the process of transitioning or have already transitioned to digital learning are often asked to provide professional development on a broader set of topics and issues related to digital content and research. Professional development may be formal, through workshops or other sessions with a group of teachers, or more informal, through social media or case-by-case, individual meetings. Some school librarians mention having drop-in sessions to

provide support on a particular tool or resource, while others discuss several sessions that they teach to teachers in their school or even more broadly in their district. The Klein ISD in Texas tapped into school librarians' expertise for English Language Arts. As Texas transitioned to the more rigorous College- and Career-Readiness Standards, teachers and students were pushed to move to nonfiction and expository reading, and school librarians' collaboration and ongoing support was very helpful. Librarians are also often called in to consult with various professional learning communities at the school.

Photo Credit: Ira Socol/Albemarle County Public Schools

Librarians may be the only people in the school with expertise on a particular application, tool, or resource. They may be the leaders in developing project-based learning or other research projects that involve a range of print and digital content available in the library and/or on the school network. Librarians are frequently leaders in helping teachers to understand the potential for learning through social media and other professional learning communities. Through Twitter, Facebook, Edmodo, or other sites, school librarians may lead their teachers to other educators and sources from around the country or world. Ethics considerations in terms of the use and citation of content have also increased with digital learning. Librarians continue to provide professional learning in the proper way to utilize and reference sources, but they now typically take on the role of ensuring that teachers have the capacity to guide digital citizenship with their students.

Students

Librarians have long taught lessons with groups of students in a special block within the school day, especially in elementary schools. As recently as a decade ago, school librarians were still teaching students how to use encyclopedias, atlases, and even phone books. Some elementary schools and even more middle and high schools implemented more flexible scheduling to allow for school librarians to work with specific teachers and their classes on projects or research. These lessons often embedded core research principles and addressed how to ethically use and cite content.

In recent years, the school librarian's role with students has evolved parallel to the librarian's role with teachers. School librarians now work more directly with individual students to guide research, helping students to identify appropriate content and understand how to cite sources used, as well as encouraging students as they work to create products and their own content. While digital learning dramatically increases access to content, it also significantly changes what students need to understand about what sources are reliable, what data can be trusted, and how to understand the source of information. Many
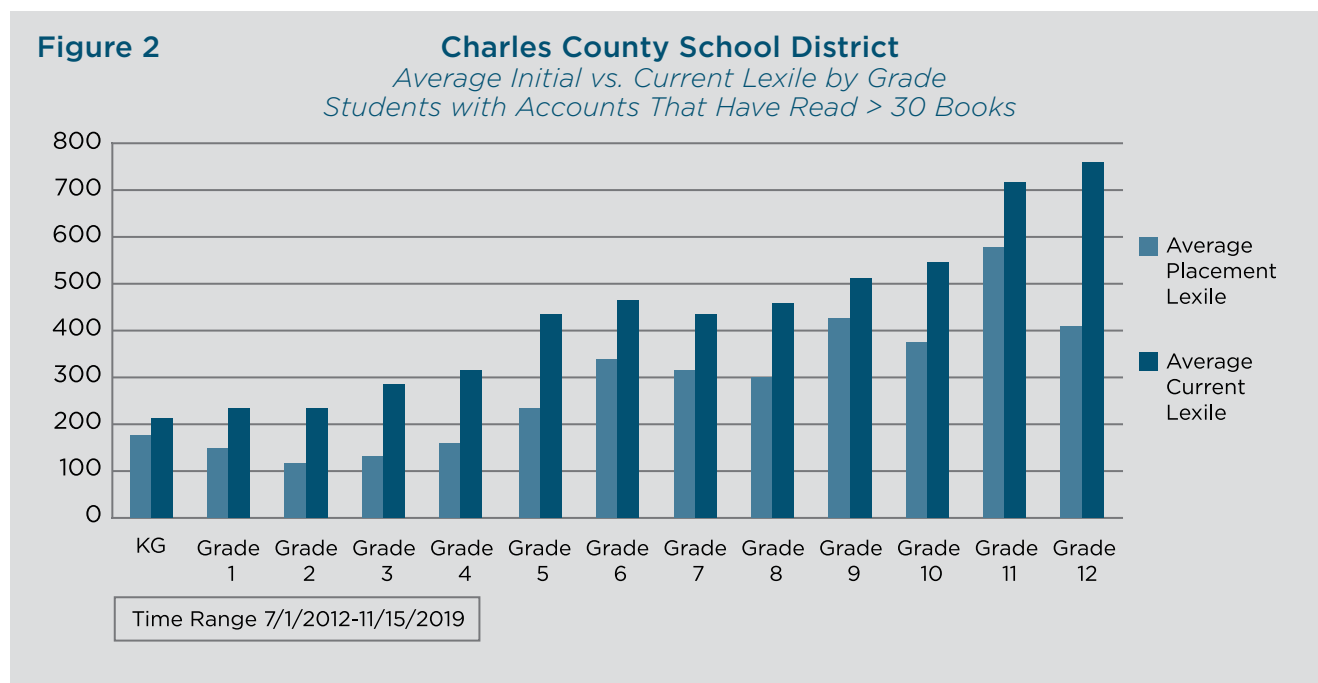

Photo Credit: Dysart Unified School District

libraries have expanded their hours, not just to provide more access to books and resources but also to provide students with a place to work on projects and to give students the opportunity to consult with a school librarian to conduct research. Gail Lewis, MLIS, senior product manager at Capstone Digital, says that "the school librarian's role is to help curate the digital content for students and to teach digital citizenship and characteristics of quality content. The question is: 'How can we help school librarians make themselves indispensable?'"

School librarians also have the opportunity to help students develop deeper learning competencies and twenty-first-century skills, including the 4 Cs, critical thinking, creativity, collaboration, and communication. Librarians can guide students as they work through projects and the development of their own products and content and ask them questions that help them think through and act on possibilities. Because school librarians often get focused time with students while they are working independently or in small groups, they can make sure that students understand how to go further with these deeper learning competencies and also help motivate them to seek answers to their questions and reflect on their learning.

The school librarian's role with students is a critical piece in the effort to personalize learning for every child, especially with project-based learning and the integration of more nonfiction and expository reading and writing in the College- and Career-Readiness and Common Core State Standards. In many states, such as Wisconsin, school librarians must be certified teachers with a library degree. While guiding students to follow up on their particular interests and recommend other resources, librarians have the opportunity to push them to ask tough questions to ensure the discussion of relevant and meaningful topics, and to encourage them to think creatively about their analysis of research or the products they create. School librarians emphasize the importance of having time before or after school or during lunch periods to work with students who may not have access to the Internet or a device at home. Through the ability to provide access to the Internet and digital tools and resources in the library, the school librarian helps to level the playing field for students who may not be able to explore the rich resources available. The school librarian also typically has knowledge about the resources and opportunities available through the public library and can recommend to the student how to take advantage of them.

Doug O'Brien, director of digital learning at TechSmith, says, "Librarians are a perfect door to open to student-centered learning; the library is always a safe place to explore." Some libraries are now able to offer books and digital content more specifically aligned to a student's reading level or Lexile score. In Charleston, South Carolina, e-books provided through myON have led to significant

improvements in student reading scores for children who participated by reading at least thirty books (see Figure 2, below). While print books can certainly be leveled to various abilities, the access and student ownership over resources geared toward the student, including content and interest-appropriate reading, regardless of reading level, helps to engage students.

Figure 2

Charles County School District
Average Initial vs. Current Lexile by Grade
Students with Accounts That Have Read > 30 Books

Time Range 7/1/2012-11/15/2019

In addition to continuously emerging resources and products, some new topics for school librarians that only minimally existed before the last decade include digital literacy, digital citizenship, and the security and safety issues that accompany them. In many schools, librarians are the lead educators on digital literacy from the perspective of student safety and character education. Librarians may work with classes of students, provide ongoing support and reminders while working one on one with students, or provide professional development and/or lessons for the teachers to guide them in their work with students. Appropriate use of content when so much is available on the Internet is also more complex than in the past. In addition to the need for more protocols for citing content, it is important to determine whether or not content is available to be used for free.

The makerspaces referenced above encourage a different type of interaction between librarians and students. The Entertainment Technology Center at Carnegie Mellon University and the Elizabeth Forward Middle School partnered this fall to develop the Spin Tops game app for the iPad to teach design thinking and connect engineering and art. Students created virtual Spin Tops on the iPad, sent them to the 3-D printer, made them come alive with art, play-tested them, and then competed in the Spin-Tops game against other teams within the classroom. This video demonstrates how this project has engaged middle school students. Librarians have the opportunity to work with students in very engaging and meaningful ways to learn and create their own content.

Administrators

Librarians are also assuming greater leadership roles in their schools and districts. Scott Smith, chief technology officer for the Mooresville Graded School District in North Carolina, says to school librarians, "You are now leaders in your school. It is the expectation that you are a leader." The

American Library Association includes leadership as one of the twenty-first-century roles for school librarians.[22] While the specific role may vary among districts, school librarians in districts and schools that have effectively implemented digital learning tend to be viewed as part of the leadership team and participate in the vision setting and implementation of changes in teaching and learning.

Research demonstrates that principal support is critical for school librarians to take on a leadership role with technology integration.[23] Librarians in the field support the importance of this relationship and the principal's understanding of the librarian's expertise and role. Battlefield High librarian Preston Lazer says, "The school librarian is included at leadership team/department head meetings. This is important, because they are not left out of the loop. The school librarian gets to see things that no one else sees with clarity—they see things falling through the cracks, so are valued as part of the leadership team. They know who doesn't have access at home. They know better than anyone who will be affected when access to the library is affected." Connie Dopierala, the media services coordinator for Charleston County Public Schools in South Carolina, agrees: "Schools where programs are the best are the ones where the administrators and school librarians have the best connection and school librarians are part of the leadership teams. The programs that are the least successful are the ones in which the school librarians will not talk to administrators. If you're not a quasi-administrator, how can you be the heart of the school?"

District and school leaders and librarians have a responsibility and an opportunity to ensure that librarians are part of the leadership team for the digital learning transition. The examples from districts across the country in the next section illustrate the importance of this vision and implementation.

Photo Credit: Cajon Valley Union School District

School Librarians in Action

Several districts that have made significant strides in digital learning view school librarians and libraries as integral to the transition.

🔍 Forsyth County Schools, Georgia

Forsyth County Schools has been engaged in a digital learning transition focused on personalized learning for each child for many years.[24] This includes a systemic approach to ensuring that administrators, educators, parents, and students have access to data to meet the needs of students and ensuring that content and instructional strategies are utilized to meet individual student needs, including an intense focus on the deeper learning competencies reflected in the 4 Cs. Forsyth is also a leader because of their "bring your own technology" (BYOT) program,[25] which allows the district to utilize more of their resources on high-speed broadband access for students, digital content, access for students who don't have their own devices, and professional development to ensure that educators have the training and support they need to utilize digital learning.[26]

The critical role of school librarians or media specialists immediately emerges in discussions with district leaders in Forsyth. The media specialists are part of the instructional technology department and work directly with the instructional technology facilitators as part of the school-based instructional technology team at each school. As experts in content, the media specialists help to identify and implement digital content and play an important role in the professional development of teachers by supporting educators as they implement new technologies and content into instructional strategies that effectively address the needs of students. The media specialists also play an important role in the BYOT program. They support teachers in the use of digital resources and in the development and implementation of lessons. They also help students as they navigate research and projects, including as they utilize their own devices. They play a primary role in the implementation of Forsyth's responsible use policy to ensure that students understand and apply digital citizenship.[27] Media specialists are a crucial part of the leadership team in Forsyth, and they support students, teachers, and administrators with an ongoing, personalized approach.

Mooresville Graded School District, North Carolina

Mooresville Graded School District[28] has demonstrated tremendous gains in achievement and graduation rates with the digital conversion that began about five years ago.[29] As part of its effort to focus on "every child, every day," Mooresville has a one-to-one program to ensure that each student has access to a device and the Internet. Although the laptops are integral to the digital conversion in Mooresville, the focus is on how teaching and learning changes to meet the needs of each student. This includes the use of effective instructional strategies, data to drive instructional decisions, and digital content. Professional development has been part of the systemic approach before devices were distributed and continues to be a mainstay for the work in the district.

> *"I don't think you can move into a digital environment without this [school librarian] position. You also have to have the instructional technology facilitator. These two positions for us are critical. I don't see how you can do it without [them] … The two together makes a big difference, assuming they are going to embrace this new role."*
>
> —Scott Smith, Chief Technology Officer,
> Mooresville Graded School District, North Carolina

Librarians or media coordinators are an integral part of the leadership in each school, and the role has changed with the digital conversion. Scott Smith, the district's chief technology officer, says that "the role of the school librarian has changed drastically. They are focused on helping students conduct research, understand copyright laws, and apply digital citizenship. It used to be that the media coordinator was the keeper of the books and never left the media center, but now he/she is out and about in the building as much as in the media center. Media coordinators are more flexible than ever before to support teachers, students, and administrators." Mooresville also has an instructional technology facilitator in each school, and the media coordinator and the facilitator work together in a symbiotic way. Mooresville has also learned about the importance of having a separate technician who is responsible for the hardware and software challenges to ensure that the media coordinators and instructional technology facilitators can focus on the curriculum and instruction needs of the administrators, teachers, and students. Media coordinators were initially concerned about circulation statistics with the move to more digital content and resources, but the circulation numbers have actually increased, with a nice blend of digital and print.

The role of the library itself has also changed, as students and teachers now come and go in a more flexible schedule as needed. The library has become a place in which more individualized tutoring and extra support during and after the school day can occur. This increases students' access to support for research and other project-based learning opportunities, as well as remediation and enrichment on specific standards and lessons. The media coordinator and the library are essential to the digital conversion process in Mooresville.

Avon Community School Corporation, Indiana

In the Avon Community School Corporation, school librarians have played an important role in the integration of digital learning.[30] Librarians are a primary source of professional development on digital content, research, and digital citizenship. Whether working to find resources to teach a standard or designing a project-based or research activity, teachers often collaborate with school librarians to plan and implement lessons and to assist in finding resources. While much of the professional development is one on one or individualized by teachers, the school librarians also provide more formal opportunities on professional development days. This may include a new tool or resource, integrating technology into lessons to meet the Common Core State Standards, or increasing the use of nonfiction in English Language Arts. The Avon school librarians are also the experts on digital citizenship. In many cases, school librarians will teach students directly, but they also support teachers in their integration of digital citizenship concepts throughout the curriculum. For example, Avon High School librarian Robyn Young developed a lesson on digital footprints

Photo Credit: Rocketship Education

to provide students with a more in-depth understanding of what happens with the information shared or posted online and what data is available about individuals on the web. Young also provides orientation for new teachers in the school to ensure that they understand the resources and professional development opportunities available to them.

Libraries have the opportunity to equalize student access to the Internet and digital content and resources, but recent budget cuts have reduced the ability of Avon librarians and libraries to ensure that students have access to useful periods of library time before and after school. The Avon middle and high schools no longer have full-time librarians. Almost all of the elementary librarians have been cut for financial reasons, and those who remain must now cover multiple school buildings. There is also no formal digital literacy instruction of students and teachers by librarians at the elementary level. While Avon has worked to expand the role of the librarian, budget cuts are preventing some of the potential positive impacts.

To develop more opportunities for access, Avon school librarians partner with public libraries. Robyn Young says that they have "developed a great partnership with the public library. The school district could not afford an e-book system, but the public library system has created e-book patrons so students can check out all of the electronic resources. The public library was already purchasing the resource, but students were not necessarily taking advantage of the opportunity. Students are now

able to be added using only their student identification numbers." Through partnerships, professional development, and individualized support of teachers and students, Avon school librarians are finding ways to help students and teachers each day despite funding reductions.

Conclusion and Recommendations

What Does It Take to Maximize the Impact of School Librarians and Libraries on Student Learning with the Digital Learning Transition?

Many districts and schools that have made tremendous strides with digital learning point to the roles of the school librarian and the library as essential components to the transition. In districts and schools such as the Avon Community School Corporation (IN), Forsyth County Schools (GA), and the Mooresville Graded School District (NC), school librarians are part of the leadership team in the school and work on a daily basis with students, teachers, and administrators. Librarians in these and other districts see professional development as a primary responsibility on a range of topics, including digital citizenship, digital content, and research. The library has also changed from a place to check out books or utilize books for research to one for collaboration, project-based learning, and online access. Librarians often can use their budgets to think strategically about providing digital resources and tools for students and teachers that are available 24/7. The examples cited above support the potential role of the school librarian in several of the Project 24 gears, including curriculum and instruction; technology and infrastructure; professional development; academic supports; and budgets and resources. The following recommendations provide some tangible steps for district and school leaders, policymakers, and school librarians to ensure that the knowledge and skills of school librarians and the opportunities available in the library are maximized during the digital learning transition.

Next Steps

District and School Leaders
There are several different options for immediate and long-lasting changes. Leaders at this level should take the following steps.

✓ Support, create, or transform the role of the school librarian to incorporate professional development and coaching for teachers, teaching and guiding of students, and support for administrators as core members of the leadership team (in many successful cases, the role of the school librarian is similar to that of an instructional coach or facilitator).

✓ Include the school librarian or librarians as part of the school leadership team.

✓ Ensure that teachers, administrators, and district staff understand the

Photo Credit: Ira Socol/Albemarle County Public Schools

breadth and depth of the role of the school librarian and facilitate the connection between the librarian and library and technology facilitators and digital learning.

✓ Reimagine the library as a flexible space that provides access during and beyond the school day and that is a commons or learning hub for the entire school.

Ann McMullan, the former executive director of educational technology in Texas's Klein ISD, had the opportunity to attend the Texas Library Association meeting in 2013. One of the activities was a gallery walk for administrators and school librarians. This opportunity for administrators to learn what school librarians can and should do was critical to changing the role of librarians in more schools and districts. Administrators can both present what is possible and also show that they are seeking to understand the issues at stake. Librarians should demonstrate models of how they can be leaders in schools, especially within the digital learning transition.

Next Steps

Policymakers and Boards of Education

There are several different options for immediate and long-lasting changes. Leaders at this level should take the following steps.

✓ Envision the role of school librarians as extending beyond the physical space of the library and being more than the keepers of books and reference materials and consider the critical knowledge and skills that school librarians bring to the digital learning transition.

✓ Consider how funding the role of the school librarian is also supporting teachers, students, and administrators in the digital learning transition.

✓ Recognize how the library and the technology within the library are essential to providing students with access to the Internet and research and learning guidance and to leveling the playing field for students without access to the Internet or devices at home, especially outside of regular school hours.

Next Steps

Librarians

There are several different options for immediate and long-lasting changes. Leaders at this level should take the following steps.

✓ Share how the collaboration, professional development, and instruction provided by the school librarian are integral to the digital learning transition.

✓ Continue their own learning to be leaders in the digital learning transition and experts who can provide professional development, implement new tools and resources, and guide teachers, students, and administrators.

✓ Lead and model the potential of the library itself as a hub of digital learning and the connection to rich and diverse content, and create a makerspace designed and positioned to meet the needs of students and teachers.

Appendix A: Focus Group Participants

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Terri Tremel, District Cataloger, Teacher Librarian, Scottsdale Unified School District, AZ

Robyn Young, Librarian, Avon High School, Avon Community School Corporation, IN

The following districts are referenced in the report. The links provide more detailed demographics and data about each district.

District/Link to District Information	Free and Reduced Lunch Percentage for 2012—2013
Albemarle County Public Schools, VA	27.3%*
Avon Community School Corporation, IN	24.2%*
Charleston County Public Schools, SC	51.3%
Hillsborough County Public Schools, FL	56.8%*
Klein ISD, TX	34.0%
Mooresville Graded School District, NC	40.9%*
Prince William County, VA	38.2%*
Rutherford County Schools, NC	70.6%*
Scottsdale Unified School District, AZ	28.25%
Sheridan County School District #1, WY	24.61%
Vancouver Public Schools, WA	53.0%
Wilson County Schools, NC	64.4%*

*Data retrieved from: Kids Count Data Center, A Project of the Annie E. Casey Foundation (accessed January 13, 2014).

NCES Library Data: http://nces.ed.gov/fastfacts/display.asp?id=42

Appendix C: Focus Group Discussion Questions

1. How would you describe the role of the librarian in your district or in districts with which you work?

2. How has the role changed with digital learning or, more specifically, with the digital learning transition?

3. How would you describe the ideal role of the librarian?

4. How do we ensure that the role of the librarian is sustainable in the current funding and priority climate?

5. What role do you think librarians should play with

    a. professional development

    b. partners or coaches

    c. content curators/curriculum developers

    d. school leadership

    e. students as content developers or producers

6. What connection do you see with public libraries and the community?

7. What other recommendations do you have?

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