



“The presence of a personal device in the hands of every student has changed the potential of school librarians and libraries.”

1:1 Initiative for Individualized Learning

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School districts in the United States from the Kent School District in Kent, Washington, to the Mooresville Graded School District in Mooresville, North Carolina, are planning, developing, initiating, and implementing highly successful ubiquitous personal device programs.

These one-to-one computing programs, often abbreviated in educational jargon as 1:1, are part of an international educational movement toward individualized learning with an increased focus on student-initiated learning. The personal device becomes a crucial tool that enables educators to create student-centered environments where learning activities are personalized and paced for the unique qualities of each learner.

LIBRARIANS AND DIGITAL LEARNING

The presence of a personal device in the hands of every student has changed the potential of school librarians and libraries. District leaders and principals are realizing that the role of the school librarian and the library’s resources are crucial to the transition to digital learning. According to the U.S. National Commission on Librarians and Information Science (as cited in Scholastic, 2008), “Resource rich libraries become sophisticated 21st-century learning environments that offer equal opportunities for achievement to all students” (p. 1).

A further enterprise that recognizes the power of librarians and libraries to be leaders in the digital transformation of learning within their schools is Future Ready Librarians (FRL). FRL is an offshoot of the Future Ready Schools initiative, a project of the Alliance for Excellent Education and the U.S. Office of Educational Technology. According to the digital learning initiative, a school

library program can become future ready by adhering to a framework that focuses on personalized student learning (Alliance for Excellence, 2016). This Future Ready Librarians Framework is visualized as a wheel, with personalized student learning at its center and surrounded by eight gears or principles. These principles further outline what school librarians can do to plan and implement a successful digital program (see Figure 1; Future Ready Librarians, 2016). The following section identifies specific examples of how school librarians are making this happen through the effective fusion of iPads and 21st-century instructional techniques.

FUTURE READY LIBRARIANS AND IPADS

Principle: Curriculum, Instruction, and Assessment

Empower students as creators: This attribute of the principle “encourages and facilitates students to become increasingly self-directed as they create digital products of learning that engage them in critical thinking, col-



Figure 1. Future Ready Librarians Framework

laboration and authentic, real-world problem solving” (Future Ready Librarians, 2016).

Library iPad application of principle: Kristy Banton, a school librarian at Mechanicsville Elementary School in Hanover County, Virginia, has used the Aurasma application (app) with fifth-grade students to create book commercials in the style of *Reading Rainbow*. Aurasma is an iPad application that uses augmented reality to create “auras.” Auras can be as simple as a video and a link to a web page or as complex as a lifelike 3D animation. Banton’s students posted trigger pictures of the books in the school hallway. A trigger picture could be an image of the book cover or student-created artwork. Parents were invited to view the commercials by strolling the hallway, scanning

each trigger picture with the iPad, and viewing the commercial. In addition, Banton’s fourth-grade class used the iPads to create a series of videos to introduce the library to parents on back-to-school night. Students also toured their library by viewing the fourth-grade videos.

Curate digital resources and tools: This attribute “leads in the selection, integration, organization, and sharing of digital resources and tools to support transformational reaching and learning and develop the digital curation skills of others” (Future Ready Librarians, 2016). According to Handley on the TopRank Online Marketing Blog (2011), digital “content curation is the act of continually identifying, selecting, and sharing the best and most relevant online content.” This content

may include articles, videos, blog posts, and photographs on a specific subject.

Library iPad application of principle: Many school librarians use the app Symbaloo to create web mixes that can curate anything from a list of websites on a research topic posted on a library catalog or website to student-created web mixes (<https://edu.symbaloo.com/shared/ahslibrary2>).

High school librarians might introduce students to BiblioBoard, a free iPad app that provides access to licensed, open educational resources and public domain materials. With the app, billed as “The PatronsFirst Mobile Library,” readers can sample up to the first seven pages of books and articles on a large variety of literary topics (<https://www.biblioboard.com/>).

Finally, a comprehensive curation website ideal for librarians launching their own iPad program uses the Pearltrees platform. Pearltrees is a Pinterest-like place for users to organize and explore their interests. The following link is a collection of project ideas, apps, and tools relating to iPad usage in school libraries (<http://www.pearltrees.com/mm319va/using-ipads-school-library/id16042060#l252>).

Principle: Robust Infrastructure

Ensure equitable digital access: This attribute “provides and advocates for equitable access to connectivity, digital devices, information, resources, programming, and services in support of the district’s strategic vision” (Future Ready Librarians, 2016).

Library iPad application of principle: iPads can become a platform for equity in schools. As of the 2016–2017 school year, every elementary and middle school student in Goochland County Public Schools, Virginia, has an iPad that he or she uses both at school and at

home. The students can access digital resources and eBooks on these devices if Internet access is available at home. However, the presence of an Internet connection in some student homes continues to be a barrier to true equity. Through a grant from the CarMax Foundation, the district mitigates this by providing free mifi devices to every low-income student in the 1:1 program. A mifi device is a wireless router that acts as a wi-fi hotspot. Despite this effort, there are still some homes that are unable to receive a signal. The district continues to research ways to meet this challenge.

Principle: Budget and Resources

Invest strategically in digital resources: This attribute “leverages an understanding of school and community needs to identify and invest in digital resources to support student learning” (Future Ready Librarians, 2016).

Library iPad application of principle: Many libraries are purchasing iPads for their students and teachers using a variety of means. Fundraising, grant writing, or appealing to local businesses and foundations may help. Of course, there are other necessary purchases to support the iPad. These include charging carts, protective cases, and paid apps. Some libraries, like the one at Westlake High in the Eanes Independent School District (ISD), in Austin, Texas, began with the purchase of six iPads. The librarian, Carolyn Foote, gathered data during the pilot program using Google Forms to survey teachers on the instructional benefits of the devices. Along with teacher and student testimonials, the survey data, and images of students and staff using the devices, the librarian was able to inspire district leaders to send a team to Apple’s headquarters in Palo Alto,

California. Within a year, 4,100 students and teachers were using iPads. Funding for the iPads came from bond money intended for technology upgrades. Apps were purchased by Texas state technology funds known as an instructional materials allotment (IMA). The IMA is intended for the purchase of instructional materials, technological equipment, and technology-related services (Foote, 2016). Beginning in the fall of 2010 with just six library iPads, the Eanes ISD is now a completely 1:1 school division (Eanes ISD, 2016).

Principle: Collaborative Leadership

Lead beyond the library: This attribute “participates in setting the district’s vision and strategic plan for digital learning and fosters a culture of collaboration and innovation to empower teachers and learners” (Future Ready Librarians, 2016).

Library iPad application of principle: Sarah Smith, librarian at Goochland Elementary School in Goochland, Virginia, feels strongly that the 1:1 iPad presence at her school fosters collaboration between herself and the teachers. Smith participates in grade-level biweekly tech meetings along with the instructional technology teacher. She uses this time to listen to where teachers are with their iPad integration and finds ways to collaborate with them on integrating library resources. One example is the fifth-grade World Faire. This is a cross-curricular unit of global explorations. Students collaborate, communicate, design, create, and problem-solve. The iPad is used for research, project planning, and audio recordings of the students describing their culture, along with the Aurasma app to create a picture trigger that launches a video about their culture. Students also use the app Ex-

plain Everything, a screen-casting and interactive whiteboard that allows students to narrate, animate, import, and annotate. For more information about the World Faire unit, visit <http://ges.goochlandschools.org/2015/12/18/our-worlds-faire-is-the-best-worlds-fair/>.

SCHOOL LIBRARIANS EMERGING AS TECHNOLOGY INTEGRATION LEADERS

School librarians often find themselves adopting a leadership role in integrating technology in schools. Johnston (2012) describes this professional shift in a study examining enablers and barriers to school librarians as technology integration leaders: “The changing information landscape and highly technological environment of 21st-century schools has significantly redefined the role of the school librarian” (p. 1).

That supposition became evident during the data collection process of a program evaluation conducted by Aitken and Austin (2016) on the impact of the 1:1 iPad program in grades 3–5 in Goochland Elementary School (GES). During separate interviews, the division’s director of innovation and strategy, the principal of GES, two instructional technology teachers, and several key teachers all identified the importance of the school librarian to the success of the 1:1 program. The director, J. Hendron, reported, “The librarian really has stepped up to help support the 1:1 program beyond expectations. We have been really pleased with her support both on a technical level and on an instructional level” (personal communication, December 22, 2015). According to J. Beasley, fifth-grade teacher, teachers described the librarian support of the program as

“amazing,” “the hardest working person here,” and “she’s able to be both a librarian and a technology assistant (personal communication, December 7, 2015). The principal, T. McCay, described the librarian as “the main communication between the teachers and the technology support along with being a great instructional support with the iPads” (personal communication, December 7, 2015). The instructional technology teachers, K. Demas and Z. Barlow, described the librarian as “taking on somewhat of an instructional technology teacher role when technology teachers are not available. This can include participating in weekly technology meetings with the teacher, collaborating with teachers using the iPad as an instructional tool, setting up Apple identifications, and troubleshooting problems with the devices during the school day” (personal communication, December 7, 2015). Sarah Smith, the librarian at GES, described her role: “This was completely new to me when I came here, so I just jumped in and ran with it. I’m still running” (personal communication, December 7, 2015).

The importance of the librarian to the successful implementation of Goochland’s 1:1 program was an unexpected finding during the study, but one that should not come as a surprise. School librarians play a vital role in integrating technology to help students develop 21st-century skills and to empower users in a digital society.

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