

# **1:1 Computing: A Case Study Exploring How a Large District Leveraged School Librarians to Improve Teacher Practice, Learning Environments, and Digital Content**

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## **Introduction and Statement of the Problem**

Most districts in the United States now provide computer devices to every student (Bushweiler, 2022). The research on 1:1 computing has primarily looked at the impact on student learning achievement, teacher and student attitudes and perceptions, and student-centered instructional practices (Penuel, 2006; Zheng et al., 2016). To date, no study has explored the role of the school librarian in any capacity in the implementation of 1:1 computing programs.

School librarians, however, are trained experts in areas relevant to 1:1 computing programs. The American Association of School Librarians (AASL) defines school librarians as highly skilled in locating and evaluating sources for quality, teaching information literacy skills, building instructional partnerships, leading in the school community, facilitating technology enabled learning, and delivering digital citizenship instruction (AASL, 2018b; AASL, 2019a), all significant skill sets to support 1:1 programs. Instead of leveraging their expertise, however, school librarians are often overlooked and underused in district technology initiatives (Johnston, 2012). The goal of this study is to explore how one large district in the United States leveraged school librarians to develop a robust 1:1 computing program.

## Literature Review

Increased access to the Internet for information is a common goal of many 1:1 computing initiatives (Cole & Sauers, 2018; Spires et al., 2009; Topper & Lancaster, 2013; Vu et al., 2019). This access provides students with opportunities to do online research (Dunleavy et al., 2007; Kennedy et al., 2016). Yet studies that focused on online research skills in 1:1 settings, did not mention school librarian involvement in any way.

Shifting to student-centered teaching and utilizing digital resources was another goal of 1:1 programs (Cole & Sauers, 2018; Erstad et al., 2015; Penuel, 2006; Ross, et al., 2020; Smith et al., 2022; Zheng et al., 2016). Professional development was identified as a necessary component to implement this change (Penuel, 2006; Smith et al., 2020; Zheng et al., 2016). School librarians, who are trained to collaborate with and deliver professional development to colleagues on embedding technology into teaching and learning, (Johnston, 2012; Lewis, 2021; Wine, 2016) were not mentioned.

Principals who were asked to identify partners for 1:1 initiatives, listed classroom teachers, the technology department, and curriculum and instruction staff (Pautz & Sadera, 2017), neglecting school librarians. Even administrators who understood that school librarians were actively engaged with technology in their practice, rarely mentioned their role in the integration of technology (Harland et al., 2022).

When districts were forced to provide devices to students due to the shift to remote teaching during COVID, school librarians had an opportunity to informally insert themselves into school structures that supported 1:1 distance learning (Wake et al., 2022). Despite providing integral services, school librarians were minimally involved with the planning and implementation of online teaching and learning at the onset of the pandemic (Wake et al., 2022).

This study fills a gap in the research and is guided by this research question:

RQ1: What are the ways a district can leverage the expertise of school librarians in 1:1 computing programs?

## **Methodology**

This single case study focuses on Baltimore County Public Schools (BCPS), a large, diverse district in the process of transitioning to a 1:1 device program. This case is an exemplar, because it was recognized with the American Association of School Librarians School Library Media Program of the Year award. Site visits and interviews with 27 stakeholders including administrators, teachers, district library program staff, librarians and the technology department were conducted. The interview data were analyzed for themes and organized around three outcomes for change that the district had prioritized: (a) teacher practice, (b) classroom environment, and (c) digital content.

## **Preliminary Findings & Discussion**

### ***Teacher Practice***

In the shift to 1:1 computing, participants described the pedagogical goals of the district were to create a more student-centered learning experience, where teachers engaged students in meaningful learning activities using digital tools and resources. At BCPS, school librarians supported teachers to help make it happen. The school librarian's role as an instructional partner was to contribute their expertise in information and digital literacy and embed those skills into instruction as well as train peers on digital tools and resources to support student centered learning.

### ***Environment***

Redesigning the physical space of classrooms and creating an environment that supported student centered learning was prioritized. The school library became a centerpiece in the district's initiative to transform the physical space and create a more inclusive student-centered environment. School librarians worked with principals to accomplish this goal.

### ***Digital Content***

The technology department and the district library leadership staff had an effective partnership that enabled them to use their areas of expertise to build an infrastructure that

allowed efficient and equitable access to a collection of quality digital resources to support the curriculum.

## **Discussions and Conclusions**

This study explored the often-overlooked role of the school librarian in 1:1 computing programs. The findings indicate that school librarians have valuable expertise that can be leveraged to support 1:1 initiatives. They are instructional partners who impact teacher practice by bringing student-centered, technology driven learning and quality digital content to all. They use their expertise in information literacy to support both students and staff develop online research skills. They provide inclusive, welcoming spaces that accommodate the diverse needs of learners. Notably, a district library coordinator or leadership staff can exponentially raise the impact of the school library program across the district.

There are several implications. The findings could inform administrator preparation programs on the need to include content on the role of school librarians and the value they add in 1:1 initiatives. They could also inform administrators on the impactful role of a district library leadership team or coordinator to scale up quality library programs and resources in all schools. Although case studies are not meant to be generalizable, readers can make connections between the findings and their settings to improve practice. More research on how districts leverage school librarians in 1:1 device initiatives is recommended.

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## Biography

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